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NOTES ON CARDIAC IRREGULARITIES.

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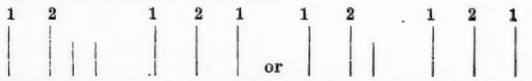
The correlation of the results of experimental physiology and pathology, with the observations obtained from clinical work, has proved the shortest route to the unravelling of the mysteries of mechanism governing abnormal heart action. This applies to many other fields of clinical activity, and particularly the advance in knowledge of nervous diseases might be used as an illustration of the direct value of the method. Though finality is far from being reached, a more precise knowledge of the faulty mechanism brings a surer management of the case, a clearer view of the probable cause, and more definite principles of treatment. When sufficient numbers of a similar condition have been grouped together the further analysis of the age series, sex incidence, and the rest of the ætiological considerations may be reviewed, and a more or less definite clinical entity becomes easier to recognise.

If a single induction shock be made to stimulate the myocardium in the diastolic interval, the muscle responds by a contraction, which, though initiated at one point, will spread through the rest of the musculature. Provided the stimulus is adequate, the magnitude of the muscle contraction is independent of the strength of the stimulus, in accordance with the "all or nothing" law discussed by Bowditch in 1872. If a series of induction shocks are thrown in, we get a series of contractions originating from the point stimulated. By more rapid faradisation the rate can be raised higher and higher until the individual contractions are scarcely recognisable. Push the stimulation further and co-ordinate rhythmical contraction ceases, and is replaced by fine tremulous flickering movements over the whole of the chamber, whether auricle or ventricle. These three stages of stimulation are comparable to the clinical conditions of premature beats, tachycardia, flutter, and finally fibrillation.

The stimulation results have been common knowledge for very many years. The correlation of these and other experimental rhythms with corresponding clinical conditions had, however, not been fully elaborated till recent times. This was on account of the difficulty in registering these rhythms in a way that permitted of analysis and deduction of the mechanism. With the introduction of a clinical appliance such as the ink polygraph, and later by the perfection of the string galvanometer, or electrocardiograph, this difficulty is gradually disappearing.

Analysis of abnormal rhythm and heart action is relatively simpler. The education which follows from the frequent use of graphic methods enables one to dispense with them in many instances, but not altogether, because the subject is full of pitfalls, and the unexpected is a common reward for the amount of labour involved. Moreover, as this field of investigation is comparatively recent, the value of collected records of series of cases may be very high, and the actual record itself may become of great interest if later on there is a departure from the observed events. There is nothing more convincing than an actual demontration from such records of change of type of rhythm or the actual demonstration of a succession of changes or transition from one type to another. When such clinical records are comparable with experimental results, or conversely, when the clinical condition can be reproduced by experiment, we have gone a long way in reducing theories to laws. Naturally a disease condition in a degenerated tissue which may have taken months or years for its evolution, compared to an experimental result obtained in a brief period of time in healthy structures, has to be critically examined with considerable reserve. It may be stated at once that all the various types of arrythmia may be produced in a heart freed from nervous connections. Stimulus formation and contractility are inherent functions of cardiac muscle. In the same way, pathological stimulus formation initiating contraction may originate apart from nervous control. This must not be taken to mean that the nervous system plays no part in cardiac derangements, nor that numerous symptoms are not the outcome of interplay by and on the nervous tissue. It is distinctly more in accordance with the facts to state that pathological rhythms are the result of changes, degenerative or nutritional, in the heart muscle. The site of normal stimulus formation is at the sino-auricular node, a group of specialised muscle cells lying at the junction of the superior vena cava and the right auricle. It probably represents a remnant of the original sinus tissue; it has a good blood supply, and is intimately blended with nerve terminations of the vagus and sympathetic. This is the "pacemaker" for the ventricle, and that it is the physiological location for initating normal rhymthical contraction has been established by Lewis, and lately confirmed by Eyster and Meek, and others. Contractions initiated from foci beyond this area (ectopic beats) give a different outline in the electro-cardiographic curves. They are the premature beats of extra systoles. They may arise either in auricle or ventricle muscle. They cause an abortive type of systole; the beat felt or recorded at the wrist is small, and occurs before the anticipated time, and is followed by a pause longer than the normal. If the contraction fails to open the aortic valves no beat reaches the wrist, and we have an intermittent pulse. The new seat of stimulus formation may originate contractions following every normal beat, so that we have the bigeminal pulse; or if such beats fail to affect the pulse the rate appears to be halved. On auscultation these premature contractions can nearly always be easily recognised. Following the normal first and second sounds occurs an early and feebler first and second sound, or a single sound if the aortic valves are not opened.



Sometimes such a focus will originate a series of contractions—a short paroxysm of a few beats. It is characteristic of these foci that they build up stimulus material at an abnormally rapid rate, and consequently while they are in activity they allow no opportunity for the pacemaker to assert itself. The dominant or normal rhythm is submerged by the faster.

This leads to a clearer conception of what true paroxysmal tachycardia is. It is a succession of extra systoles or ectopic beats. This rhythm therefore shows a rapid rate; its onset is abrupt, and the duration may be anything from a few seconds to weeks. The termination of the tachycardia is equally abrupt. For some reason the centre of pathological impulse formation is exhausted or controlled, and the normal rhythm initiated at the sino-auricular node becomes again the dominant one. That this is not mere speculation can be shown from the electrocardiographic curves of these cases. This rhythm is definitely related to the occurrences of extra systoles in the same patient, because the individual beat of the nerve rhythm retains the outline of the extra systole beat. One of the values of the electro-cardiograph lies in the fact that it locates individual beats to definite areas of the musculature; as our knowledge widens this localisation becomes more precise. It shows the general direction of the spread of the contraction, and whether this is along normal paths or otherwise. It gives accurate measurements of the time relationship of auricle to ventricle, and

therefore brings out conduction defects. Abnormal beats are recognised at a glance without as a rule elaborate analysis. Lesions not only of the main conduction bundle of His become apparent, but also even lesions of its branches. Such pictures are indubitable signs of myocardial involvement, and usually part of a more widespread change. The occurrence of an inverted "T" wave in Lead II carries with it as grave a prognosis as the discovery of pulsus alternans with the polygraph. The curve outlines representing auricle and ventricle, are recorded as long as the patient can be connected with the galvanometer, so that feebleness of impulse, dyspnœa, etc., do not impose such limitations as are met with in using the polygraph; in addition, the reading of the curves is much simpler. It is our most accurate means of detecting abnormal rhythm and certain heart muscle lesions, such as degeneration in branches of the conducting tissue, seat of origin of abnormal beats and rhythms, etc.

An important characteristic of a new rhythm is abruptness of onset. This applies to paroxysmal tachycardia, auricular flutter, and fibrillation. The sudden onset may alter the whole clinical picture in a very short time. The symptoms produced depend on exhaustion of the heart muscle, by the rapid rate. The severity of the symptoms depends on the rate, the duration, but more especially on the condition of the heart muscle. With the bulk of the ventricular muscle in a healthy state, the signs of heart failure may be surprisingly few; on the other hand, with widespread myocardial degeneration the patient rapidly drifts, and presents the picture of advanced heart failure.

True paroxysmal tachycardia can be distisguished from tachycardias of nervous or toxic origin by the history of the abrupt onset and offset, and also by the fact that rest or exertion does not slow or quicken the rate as it does in the latter types. A history of sudden attacks of palpitation ought always to be investigated from the point of view of a possible nerve rhythm. Patients of phlegmatic disposition are not infrequently free from palpitation symptoms; others, more observant, give accurate accounts of the attack, and excluding the exaggerated symptoms of neurotics, may supply valuable evidence of the initial onset. The graphic curves readily differentiate them. Auricular flutter is a new term in clinical medicine. It refers to a very high grade of auricular tachycardia (200 per minute or more), associated with a ventricular rate which may be as high but more commonly is some multiple of the auricular speed. In other words, auricular flutter is usually a combination of auricular tachycardia, plus partial heart-block. MacWilliam, in 1887, first used the term for the rapid auricular rhythm which was produced by rapid faradisation of the auricle, as the rate rises to about 300 or more per minute; the eye can scarcely follow the individual contractions, so that "flutter" well describes the appearance. If the stimulation is pushed further coordinate contractions ceases, and is replaced by extremely rapid flickering, tremulous movement over the surface of the auricle which stands in the diastolic (dilated) condition. The pumping action of the chamber is practically gone. This is the condition known as auricular fibrillation, and will be dealt with later. Though cases of rapid auricular rhythm, with slower ventricular rate, have been recorded from time to time, Jolly and Ritchie first applied the term auricular flutter to a case recorded by them in 1911 Heart. vol. II.). Since the more extended use of the electro-cardiograph it has been found that these cases are by no means uncommon. Lewis discusses the condition very fully in Heart, 1912, vol. IV., 2, and records sixteen cases. For the diagnosis, in the present state of our knowledge, graphic methods are necessary. The polygraph curves may be sufficient, but most cases require the electrocardiograph, especially where the jugular pulse is small, or difficult to record on account of dyspnœa, etc. It may be suspected in any case of unexplained heart acceleration, especially in elderly people. In an otherwise irregular pulse where the tracing shows a few successive regular beats, which duplicate themselves further along the curve, it may also be suspected.

Regularly spaced beats are rarely found in auricular fibrillation curves. Total irregularity is the main characteristic in this latter condition. The ventricle rate in cases of flutter may equal that of the auricle, so that the rhythm is extremely rapid, and the cardiac output correspondingly poor. Such patients show serious signs of distress, and may have syncopal attacks from cerebral anæmia. It is more common to have partial heart block associated, so that the ventricle fails to keep pace with the quickly-beating auricle, the pulse rate is slower, and symptoms usually less severe. The pulse rate may be any multiple of the auricle, e.g., 200: 100: 2: 1: 3: 1, etc. Quite commonly there is a continual variation in the ventricular response. so that we get combinations of 2: 1, 3: 1; 4: 1, etc., producing a seemingly hopeless example of radial tracing for analysis. When it is further realised that the beats may be irregular in force, it will be apparent how closely this arrythmia resembles that of auricular fibrillation and why it so often demands the electro-cardiograph for its elucidation. Most of the cases occur in elderly people, probably as the result of degenerative and nutritional changes in the auricular muscle. It may occur in people under middle age, and may have been present for years without producing serious limitations. In this way it resembles auricular fibrillation. Hume has reported its occurrence in diphtheria. The prognosis, as in all types of heart disturbance, depends on the relative integrity of the all-important ventricle muscle, and the rate of contraction which it maintains. Once established, the rhythm tends to persist, but it may cease abruptly, and normal rhythm return. Under digitalis there are many of these cases which pass into the higher grade of irregularity—auricular fibrillation. If the drug is withheld when this occurs normal rhythm not infrequently returns. This is the line of treatment recommended by Mackenzie and Lewis.

The highest grade of rhythm disturbance which may overtake the heart is that of fibrillation. That this is so may be gathered from the results of experimental stimulation, and also from the observations made in clinical work, particularly from electro-cardiographic investigations. In this condition co-ordinate contraction does not take place, the chamber stands in diastole, and in place of regular rhythmical propulsion of the blood we have flickering, tremulous movements over the surface. These are practically inefficient in maintaining a blood circulation. The occurrence of such a disturbance in the ventricle, if it lasts longer than some seconds, is incompatible with life, and, indeed, as far back as 1889 McWilliam, on experimental grounds, suggested this condition as a cause of sudden death. Recently Levy has shown that it readily occurs (in cats) under light percentages of chloroform anæsthesia combined with a small injection of adrenalin, and he correlates these results with cases dying under chloroform administration and adrenalin injections. Most of these have occurred during submucous resection of the nasal septum, when this combination of drugs has been used.

Fibrillation in the auricle is a different story. The blood reaches the ventricle readily enough through the venous filling of the auricle. The pressure that results is sufficient to open the auriculo-ventricular valves in ventricular diastole, and the ventricle maintains a more or less efficient circulation. Though the auricle is not really contracting in the ordinary sense, it is alive with movement. The consequence is that stimuli are showered down to the ventricle through the conducting tissues. The ventricle responds to a certain proportion of these in a purely haphazard fashion, therefore the ventricular rhythm is wholly irregular in relation to the diastolic intervals. As the blood content of the ventricle will be variable so also is the force of the contraction and the pulse wave. The number of ventricular responses per minute depends mainly on the conducting power of the bundle of His. Where there is impairment of this function the ventricle rate is slower, but still irregular, though this is less manifest. Cases also occur where no auricular stimuli reach the ventricle. This latter assumes its own rhythm (the idio-ventricular rhythm), which is usually somewhere below 40 per minute. This may also occur as the result of digitalis administration.

It is thus seen that fibrillation in the auricle may be

combined with any grade of heart-block and, in that it spares the ventricle, is an advantage to the patient. It prevents exhaustion of the ventricle by a too rapid rate.

Fibrillation, like other arrythmias, sets in suddenly. Some patients give clear accounts of the sudden onset of palpitation due to this irregularity, others are quite unaware of the irregular heart-action. It may persist for years, and be consistent with fair health; on the other hand it may rapidly cause heart-failure, and even sudden death. It is especially interesting in that it is of quite common occurrence, especially in elderly people and in late cases of post-rheumatic mitral disease. It has been observed in diphtheria and in other acute diseases. The chronic types, especially in younger subjects, show a remarkable response to digitalis in efficient doses. This is brought about by the drug's action in increasing vagal inhibition, in producing heart-block, and partly by a direct action on the ventricular muscle. It is essential in these chronic cases of auricular fibrillation to continue digitalis administration in sufficient quantity to maintain a reasonably slow ventricular rate. The amount required varies with the individual case; most patients, after some months, learn to regulate the amount according to their feeling of dyspnœa. With a rapid pulse rate it is necessary to push the drug. Usually twenty minims of the tincture of digitalis, taken three times a day, will be sufficient. The pulse rate gradually comes down, and the patient's general condition improves. Within four to eight days or so headache and nausea will be produced, and these are indications to suspend the treatment. After about twenty-four hours the digitalis should be recommended in doses of about ten minims three times a day, and so on in diminishing quantities, according to requirements. The heart rate must be carefully observed during the administration of the larger doses; pulse counts are unreliable owing to the irregularity in the force of the beats, so that the rate should be taken by auscultation. A rate of 60-80 per minute is a safe minimum. In addition to the danger signals of headache, nausea, vomiting, and marked pulse slowing, another of great importance must not be overlooked. It is the appearance of coupled beats. In this curious arrythmia the ventricle gives beats in groups of two. The second beat follows on immediately after the first, and is then succeeded by a pause, i.e., a bigeminy results. The second beat may or may not be palpable at the wrist; it is really a premature ventricular contraction of similar nature to others of this group. The coupling most readily occurs in post rheumatic mitral cases, with auricular fibrillation. To continue digitalis after its appearance is to court disaster from sudden death.

In cases of auricular fibrillation where the heart rate is very rapid and irregular, and it is urgently required to slow the heart in a shorter time than digitalis can achieve, Strophanthin intravenously may be employed. It is given in doses of 0.004 grain or less, in about 60 minims of saline solution, and will slow the heart in about six hours. It may be repeated if necessary at this interval. A drug with such a powerful heart action must be used with caution, or over-stimulation results.

Both the tinctures of digitalis and of strophanthus rapidly break down in water, and are better prescribed as simple tincture, or combined with tincture or syrup of orange as a corrective. It is needless to add that the usual measures of securing rest, sleep, and bowel action, etc., are on no account to be neglected.

Cardiac arrythmia of some type is of frequent occurrence in elderly people. Premature beats are most common, but they are easily overlooked unless one takes the pulse for a minute or more. Auricular fibrillation is often the basis for heart symptoms, and the indications are that auricular flutter will also be shown frequently to be present.

Pulsus alternans, a regular rhythm of alternate large and small pulse beats, is generally found in association with chronic kidney disease, in angina, and generally in those with old-standing myocardial degeneration. As a grave prognostic sign it ranks with albuminuric retinitis. The expectation of life is usually less than three years, unless there is a removable cause for the heart exhaustion, e.g., an attack of bronchitis. It needs a pulse tracing for its determination. There is little doubt that it is the frequency of myocardial degeneration which accounts for the appearance of these irregularities of rhythm in elderly persons. Conversely may be explained their comparative rarity in children. The youthful type of irregularity (sinus arrythmia) is a physiological vagal disturbance, and of no clinical import. It consists in a phasic acceleration and retardation of the pulse rate usually corresponding to the respiratory cycle, quicker during inspiration, slowed during expiration. However, when the whole heart action is slowed and irregular it may easily be mistaken for a serious disturbance, especially when it is prominent in the convalescence of such a disease as diphtheria. The phasic character of the waxing and waning of the pulse rate is the best guide to its detection, and a graphic record will quickly relegate it to its place.

We are not yet in a position to classify disturbances of rhythm in relation to focal changes in the myocardium. Our most precise knowledge is in heart-block. Many cases have been examined histologically by serial sections, and the great majority show definite changes in the bundle of His, such as would cause discontinuity, and would interfere with conduction of the stimulus from auricle to ventricle. This corresponds entirely with heart-block produced in experiment by cutting or damaging the conducting tissues. However, clinical cases are on record where no such change could be found. Presumably in these we have a functional change produced by nutritional or tonic alterations.

Cases of auricular fibrillation or flutter have shown widespread degeneration throughout the auricle tissue, and in some the sino-auricular node is particularly involved. It is to be hoped that further investigation will yield more precise localisation. The pathological changes underlying the production of premature beats and paroxysmal tachycardia have still to be settled. We do not know whether it is a degentrattion spreadisg in from an endo- or exocardial focus, or whether it arises deeper in the musculature. Probably the lesions are not gross, and may need more refined methods for their detection than the usual post-mortem and histological examinations.

Space does not permit of fuller details of the clinical and pathological aspects. The field is a wide one, and can be clinically investigated by most practitioners even without the aid of special apparatus. Those who may wish to pursue the subject further from the clinical side will find the following English works highly useful, viz., a small book by Lewis, "Clinical Disorders of the Heart Beat," and a companion book by the same author, "Clinical Electrocardiography"; Mackenzie's "Diseases of the Heart" is a classic, and needs no further mention.

THE SURGERY OF THE SUBPHRENIC SPACE.

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(Read at the monthly meeting of the Victorian Branch, B.M.A., June 3, 1914.)

I am honoured by being asked to give you some of my views on the surgery of the subphrenic space, and all the more am I sensible of the honour when I consider how difficult a subject it is to explain, and in how great difficulty the surgeon finds himself when in the presence of a case where this space is infected. The difficulty in both description and treatment is due fundamentally to the large size of the space which is of course potential, and includes intraperitoneal portions and extraperitoneal portions, so that the subphrenic space can be inflamed as regards its cellular tissue or its serous surfaces. To show the great extent of the space I asked Dr. Matheson to take some measurements for me. These are his results: The greatest distance in coronal plane was 12 inches; this was the average of six ordinary livers—antero-posteriorly

over the dome of right lobe it was 10 inches, and over the dome of left lobe 7 inches.

In an area of this size is it any wonder that difficulties of diagnosis and treatment arise, especially when there are so many possible causes of infection and disease present? The largeness of the area allows of quite considerable tumours or collections of fluid to be present with but little signs; it also allows of the existence of a low tension in inflammatory fluids, and therefore but few symptoms.

A variety of organs impinges on the diaphragm, if not normally at all events in disease, and each one of these may be a possible disturber of the beautiful relations which exist between the liver and diaphragm, or the stomach and diaphragm.

The level of the subphrenic space alters with alterations of the diaphragm, and it may be much raised without our being able to say that there is anything wrong with it, e.g., I have seen a very large hepatic hydatid cyst force the diaphragm up to the level of the third and even of the second rib, without impairing the integrity of the space. In the opposite direction the space may be depressed by pleural conditions, e.g., effusions, empyema.

As a rule the space is at a lower vertical level on the left side than on the right, but dilation of the stomach may be so great as to equalise the levels. The position of the diaphragm is best arrived at by the aid of the fluorescent screen. The space may be traversed by tumours and inflammations with but little harm to it, e.g., a hydatid on upper surface of the liver discharging into a bronchus, and adhesions may be present after operation without any discomfort to the owner. I have several times examined cases after the transpleural operation, and have seen the shadow of the diaphragm distorted at the site of the operation. The space on the right side may be obliterated, wholly or in part by disease, causing adhesions between the upper surface of the liver and the under surface of the diaphragm. The commonest cause of dense adhesions in this position is, in my belief, syphilis, and whenever I find massive adhesions in this situation, not due to obvious hydatid disease or intrusion of the omentum, I suspect syphilis very strongly.

Many years ago I saw a case in which the liver was glued to the diaphragmatic vault by thick adhesions, and which also showed extensive specific ulceration of the intestine, and I have seen enough cases since where this association seemed to me to exist to confirm me in my belief.

Gumma of the liver is apt to give rise to adhesions of the peritoneal surfaces of the space; the recurring pains over the liver region experienced by old tertiary syphilitics are generally to be interpreted in terms of adhesions between the liver and the diaphragm. Nature as well as the surgeon occasionally fill up portion of the space with fringes of omentum—I have three times found this when operating to achieve it.

Carcinamatous aggregations will sometimes cause adhesions by their raised periphery, and the interior being filled with serous fluid, a most puzzling condition results.

On one occasion I operated transpleurally on one of these aggregations situated on the upper surface of the liver. It had produced a moderate amount of pleural effusion, and I mistook it for a hydatid on the upper surface of the liver. Quite recently, with Dr. McLean, of Brighton, I saw a case which puzzled us very much until a portion of tissue removed was declared by Dr. Mollison to be endothelioma. This implicated the pleura, diaphragm, and subphrenic space, though we could not tell where the growth had started. Here again the most reasonable diagnosis seemed to be hydatid.

The peritoneal surfaces bounding the space are kept in apposition by the intra-abdominal pressure, but they may be separated by collections of fluids or gas, or both, by new growths, or by omentum or colon being forced in between the liver and the diaphragm, as occurs occasionally.

On the upper surface of the diaphragm there is another potential serous cavity of varying size. The pleura is of greater extent than the expanded lung, and of much greater extent than the lung with its ordinary amount of contained air. Anything that raises the level of the subphrenic space increases the area over which the costal pleura and the supra-diaphragmatic pleura are in apposition. In performing transpleural operations the nearer the surgeon keeps to the costal cartilages the more likely will he be to strike the apposition of the two pleural surfaces. This has three advantages, first, that it is technically much easier to enter the abdominal cavity in this situation; secondly, that no collapse of the lung can take place; and, thirdly, and most important, that sepsis is much less likely to spread into the general cavity of the pleura. Per contra, the mid-axillary line, unless at the costal margin, is the worst place in which to open the pleura preparatory to opening the peritoneum. Hydatid on the upper surface of the liver of size sufficient to cause symptoms without suppuration, can be attacked as a rule transpleurally by removing a portion of costal cartilage or rib adjacent to it. The greatest importance is attached by me to this choice of position in transpleural operations. In pursuance of this I have on two occasions operated too far forward to hit the hydatid, which was of moderate size. Except for loss of time, no harm was done, as it was easy to follow the rib back a short distance until the place where the adventitia implicated the subphrenic space was reached. Though I have several times lost cases of liver hydatid operated on abdominally, I have not yet lost one attacked transpleurally, which is due largely, I think, to a recognition of the value of selecting a spot where the two pleural surfaces are apposed and will remain so. Operations, I take it, should never be performed without a screen examination, which shows us definitely the shadow of the cyst.

Transpleural operations are obvious, not so subpleural operations, i.e. access to the diaphragm behind through an intercostal space without opening the pleura. It is doubtful whether we can utilise this route with advantage except occasionally. We know that disease, notably hydatid and carcinoma, passes through the diaphragm into the thoracic cavity by direct extension, by continuity of tissue; infection can pass in either direction in this way, but also by means of the lymphatic system, which is of an elaborate arrangement in this situation. It is said that the passage is more facilitated by anatomical disposition when the invasion is from above than when it is in the opposite direction. Of course there is always the difficulty of negativing the carriage of germ infection by the blood stream. Pneumococcic infection of the peritoneum does not appear generally in the vicinity of the diaphrgam, and the sudden appearance of infection in the pleuræ or pericardium in a person abdominally inflamed can be better explained in many cases by blood distribution than by direct lymphatic infection. Great pressure in the space must interfere with the lymphatic return, and serous effusion in the pleura is a common accompaniment of live hydatid of a large size on the upper surface of the liver. It is to be remembered that pleural effusion is much more likely to be a concomitant of hydatid on the upper surface of the liver than of hydatid of the lung. Inflammatory fluid in the pleura may be due to abscess beneath the diaphragm, so that we have a layer of clear fluid or of pus. In a similar manner great pressure may cause varicosity of the veins of the diaphragm, which empty mainly into the musculophrenic in this situation.

A very bad quarter of an hour was experienced by me once during a transpleural operation for hydatid on the upper surface of the liver in a person who showed large subcutaneous veins. After the removal of a portion of the eighth rib I plunged a knife in the space left through into the cyst. Alarming venous hæmorrhage occurred, which a finger in the adventitial cavity was able to control. It was extremely difficult to stay in any other manner, even temporarily. A large tampon of gauze in the cavity, stuffed with the pledgets and pulled into the wound, eventually stopped it, but further bleeding took place a week later on removal of this tampon, and had to be arrested in the same way. Eventually a good recovery was made. I take it that the diaphragmatic veins were varicose from the same reason as the sub-cutaneous ones, and I had partially divided a dilated vein. It is the only time I have

had serious trouble with hæmorrhage in hydatid operations. I had the moral support of Dr. Maudsley in this case, and I assure you it was needed.

Concerning operations for hydatid cyst on upper surface of the liver, I have already spoken of the great importance in my opinion of choosing a portion of rib as far forward as possible after the use of the fluorescent screen. The patient should be viewed face to the tube, and back to the tube to see in which position the hydatid is nearest to the screen. Puncture with a trocar before operation is inadmissible. When a portion of one rib is removed, and one rib as a rule is enough, then the exploring trocar can be used with advantage. A small one is best, and the objects of its use are, firstly, to confirm the suspected existence of the hydatid, and then to determine the distance between the diaphragm and the cyst. This can generally be gauged with fair accuracy. If the adventitia abuts right on to the subphrenic space there will be no liver tissue to pass through, so that a knife can be plunged through two layers of pleura, the subserous tissue, the diaphragm, and two layers of peritoneum, into the cavity of the adventitia. At once the left forefinger should enter and pull up the adventitia into the wound. Four stitches are now put through these various tissues (which are now for the surgeon one single layer), so that looking into the wound we see right into the adventitial cavity. We but imitate nature in this stitching, when she essays the emptying of the cyst into a bronchus. This method seems somewhat wanting in care, but as a matter of fact it is much less risky than more careful manœuvres, viz., sewing the surfaces of pleura together, cutting through the layers singly, opening the adventitia by large trocar, and so on. We want to avoid soiling of the pleura and peritoneum by hydatid fluid, and this quick way is the best manœuvre, I am sure. If there be a layer of liver tissue over the cyst then we must proceed more circumspectly, and, boring through the hepatic tissue with the fingers along the track of the trocar is the best way of dividing it. This can seldom be needed, as by the time the cyst is discovered in the vast majority of cases it will have incorporated the serous membrane with its adventitia. The patient should be lightly anæsthetized so as not to nullify abdominal pressure, which can be increased by the hand of the assistant pressing on the integuments below the costal margin. There is no need to alter the technique for suppurating hydatids, in fact if I am right, they need for their treatment the bolder method more than uninfected ones. I have the greater respect for infected cysts near the posterior aspect of the vena cava, of a size that does not cause them to be accessible in the way I have described. They are a very deadly form indeed. They tend to burst into the vena cava, and give rise to fatal hydatid embolism, or hæmorrhage. Even the uninfected cysts may take this desperate course. Therefore the surgeon, if he can diagnose such cysts, wishes to reach and remove them, if he can diagnose them by the pain they cause when infected, by the septic condition of the patient, by some increase of heavy dullness in the liver area behind, by possible help from the screen, and by the presence of an eosinophilia. Fortunately, in addition to the chance of a burst taking place into the vena cava, there is also a tendency greater, I think, than the more fatal one of an infection of the right pleura ensuing. When this occurs the surgeon's chances of bringing the case to a successful termination are much increased. He opens the empyema by a large opening, and endeavours to find the track by which infection has reached the pleura; if he can follow this it must lead him into the adventitia. I venture to deprecate the use of the knife in this position; the trocar may be employed when the empyema is opened, but to use the knife in the liver anywhere near the vena cava is to court disaster. In these very difficult, though fortunately rare cases, I think waiting and watching for an empyema to form is probably the best treatment, although a tragedy may occur on the side of the vena cava. An unusual form of hydatid, viz., the sub-pleural cyst, would give rise to great difficulty in diagnosis if it were present in the lower part of the posterior mediastinum. The fluorescent screen again would be of the greatest assistance. As a rule subserous pleural cysts are found higher up, about the level of the scapula, when of course they would be outside our discussion.

A very trying form of disease, which may implicate the subphrenic space and its surroundings, may be found in the sequelæ of typhoid infection of the ribs. I have seen a case of this disease where the parts that I have just described as being stitched together in hydatid disease, minus of course the adventitia, were thickened to a great degree, and welded into one tissue more than an inch thick. These cases are incurable as far as I know.

Of actinomycosis in this region I have seen but one case, and that in the postmortem room. I remember thinking that it also was beyond the reach of surgery.

When we approach the subject of pyogenic infection of the subphrenic space we are met with difficulty, both in diagnosis and treatment. This is mainly due to the two reasons mentioned before, first, the great size of the space; second, the number of organs from which infection may originate. The resulting abscess will be small at first in most cases, and the history, even after the abscess has been present some time, will be the history of the cause, e.g., gastric ulcer, or appendicitis in the majority of cases, but there are exceptions. For example, the abscess may remain small, as I have seen on several occasions; the cause of the abscess may have no antecedent symptoms, or may be far away in the body, and a connection between the two is not at first obvious. Sometimes the subphrenic abscess may be successfully treated and the cause remain unknown.

The classical limits of abscess in the space we are discussing have of late years been enlarged, and abscesses both under the liver and those which have reached the surface on top, are called sub-diaphragmatic. Then again, modern surgery by early operation has inhibited many causes from acting, and if the subphrenic space should have been infected, the resulting abscess is sought for earlier, and treated before all its classical signs and symptoms are present. Following nature we can classify abscesses on the upper surface of the liver by the bisecting lines of the coronary and falciform ligaments. This gives us four unequal compartments, and where the crossing of the ligaments takes place a large non-peritoneal space occurs. Abscesses large and small may occur in any of these positions, and they may be continuous with abscesses on the under surface of the liver or in the flanks. Certain anatomical facts help us to understand the symptoms and signs of a more or less fully-formed abscess in any of these compartments. Thus the coronary ligament is set very far back, and pus in the back part of the right anterior intra-peritoneal compartment of Barnard will be reflected in symptoms at the back rather than the front, and we find that it is easily confounded with a patch of pulmonary consolidation at the base of the right lung. Then again, the liver narrows so rapidly towards the left that a perigastric abscess from carcinomatous ulcer is bounded by diaphragm above and stomach below, the liver entering but slightly into the combination.

Again, the portion of liver uncovered by peritoneum is considerable, and an abscess in this areolar space can acquire both size and tension, so that it is more strictly above the liver than the others, and able to force the liver downwards, which the other subphrenic abscesses cannot do, they being forced down by the liver. It tends eventually to develop along the round ligament towards the umbilicus, at which it may point. It is rare, and should be opened high up in the costal angle, near the xiphoid cartilage. I have never seen it fully formed, but I remember its results in one old lady, who had a sinus into it from the navel and a history of the discharge of much pus and gallstones. The right posterior position for abscess, that is behind the coronary and the right lateral ligaments, is difficult indeed to diagnose. It arises both from appendicitis and gall-bladder conditions. I had the misfortune to induce one in a cholecystectomy last year. Getting more hæmorrhage in a very septic case than I liked I had to plug with gauze far in under the liver; this eventually produced an abscess which, associated with the

pre-existing septis, caused the patient's death ten days after the operation. This abscess was discovered post-mortem.

The right anterior intraperitoneal form of abscess varies much in size and position. It may arise from a number of pathological conditions, which cause invasion of its integrity by simple direct extension, but it may be caused, I believe, through infection carried by the portal system, thus the case of a man of 38 years, with very bad ulcerated hæmorrhoids, who developed an abscess between the liver and the diaphragm, for which no other cause could be assigned, seems to bear out my contention. An anterior incision along the costal margin lead to an excellent recovery. Infection through the portal vein may manifest itself through the gall-bladder, the substance of the liver, or the hepatic surface, and all these without pyophlebitis. Abscess formations in this compartment following appendicitis are the commonest form, and give the surgeon much anxious mental exercise. How are we to diagnose the condition? We do not even think of it so long as the patient is doing well, but if he pauses in recovery, if his temperature chart assumes a septic character and especially if his tongue remains furred, we become anxious about the subphrenic space. A fully developed abscess will have a tender margin, though the mass of the abscess may cause neither pain nor tenderness. (X-rays will help but slightly in the smaller case). However, tenderness should be sought for in every suspicious case, especially in the intercostal spaces and behind. Percussion may give a heavy feeling of increased resistance to the finger, and be valuable, but we are driven to consider the exploring trocar whether we like it or not. Is it admissible except at the actual operation? Personally I believe it is, though there must be danger to the pleura in every case. It is, of course, inadmissible below the costal margin. If the patient is very ill, he will very probably die if you cannot arrive at the proper diagnosis; the surgeon is justified in taking some risk, and if he uses a very moderate sized trocar or needle, and keeps as much as he can to the confines of the pleura, where the layers are in contact, I believe the risk is small. A large trocar may lead to terrible results from leakage into the pleura, as Barnard reports in his classic paper. It is certainly wise to be ready to go on with the operation if pus be found, and then of course the cannula had better be left in position. Dr. Mollison remembers a case where a subphrenic abscess after appendicitis was revealed by the exploring trocar after many punctures, and opened by me with successful results, although a localised empyema formed afterwards, and had to be opened a good deal higher up. If the danger of sudden flooding of the pleura be avoided by using a trocar of small bore, I feel sure we should be wrong to neglect the surest means of diagnosing pus, viz., the use of the trocar. We certainly do not wish to enter the liver with the instrument if we can help it, so it is used warily and tentatively. Of course if the patient's strength is holding out well, it may be wisest to wait in the hopes of the abscess showing below the costal margin, or by fulness of the inter-costal spaces. Barnard draws a firm distinction between abscess in this compartment of the space due to appendical inflammation and that of gastric or duodenal origin. In the former the edge of the liver is apt to adhere to the diaphragm along the costal margin, thus preventing the abscess coming into the open. In the latter the abscess does come below the costal margin, and is restrained by the round ligament of the liver to the left and the colon and omentum below. Either of these abscesses may be continuous with collections of pus situated beneath the liver. A variety of incisions can be used in these cases. Immediately below the tenth right costal cartilage is, in my opinion, an excellent one in some cases. In a case of Dr. Player's, where a gall-bladder had perforated and induced an abscess, it afforded excellent drainage, leading to a cure in the person of a male, aged 64 years. This incision gives good access to the under-surface of the liver, even to the portal fissure. When the abscess is fully developed, and consequent on gastric or duodenal perforation, an anterior incision in the site of the greatest swelling is to be chosen. In other cases the transpleural route is a necessity. Two incisions may in same cases be advisable, and the presence of an assistant with unsoiled gloves and instruments is strongly insisted on in a recent paper in the "Annals of Surgery." One incision would be anterior, and the other behind, and the utility appears to be obvious. To me, however, a counter opening in such cases is a mistake as a rule. It produces a fresh raw surface in a person already absorbing much toxic material, and it interferes with the action of the intra-abdominal pressure, which is so strong an ally of the surgeon. A moderate-sized incision into the abscess, the introduction of drain tube to a moderate depth, and as little pulling about of the parts as possible seem to be the requisites of surgical intervention. The elucidation, or the attempted elucidation, of the cause of the abscess is to be classed under the head of meddlesome and mischievous surgery.

In the left anterior intra-peritoneal compartment we may find abscesses of varying size. I have never seen a fully-developed one here with a bulging to the right of the round ligament, and a lower edge extending to the costal margin low down from the umbilicus, and I have never found the gas-bubble in this abscess, which gave the older writers such opportunity for terminology. Curiously enough neither Prof. Sir Harry Allen nor Dr. Mollison can give me particulars of such a case from their experience. It must occur; such succinct accounts appear in the older descriptions, and Barnard says it is seldom absent in this last abscess immediately below and to the left of the ensiform cartilage. I have questioned quite a number of my friends, but the gas-bubble still eludes me. It must be a startling phenomenon when found, as it shifts its position with any change of posture of the patient, producing extremes of resonance and dulness in the same place, according to its movements. I have, however, seen three small abscesses in this compartment which could rightly be termed perigastric abscesses. Around them existed an efficient rampart of inflammatory material. Two were opened by myself, and simply drained with recovery, no attempt being made to solve the pathology. The third, or rather bigger one, I saw with a colleague, who made an effort to ascertain the cause, with the result that a fatal general peritonitis followed. A good leucocytosis I remember was present in each of these cases. A count on successive days must be of the greatest help in cases where infection of the subphrenic spaces is suspected, although the result is discounted to some extent by the antecedent inflammation and by operation.

Perigastric abscesses, which do not come forward, but which tend to fill the vault of the diaphragm on the left side, are very generally found in connection with carcinoma near the cardia, and with mural cancer under cover of the left cartilages and ribs. If they are suspected by the pressure of inflammatory signs and symptoms, a review of the case is very necessary before operation is decided on, because of this frequent association with carcinoma. The same association of carcinoma and abscess is often seen in the intestine, abscess being not infrequently the first sign that calls attention to the underlying tumour. In the subphrenic variety we should stay our hand from operation if the history of the case suggest carcinoma. With intestinal cases it is different, and I have had the good fortune to open the abscess and eventually to excise successfully the carcinoma of the small intestine in connection with it.

Abscess in the lesser cavity of the peritoneum occurs very occasionally, and cannot or should not be diagnosed at operation. Marsupialization, with drainage, is the treatment of all collections of fluid which come forward either between the stomach and liver or between the stomach and colon, and the surgeon can surmise at his leisure whether the pus was in the lesser bag of the peritoneum, or a pseudo-pancreatic cyst, or a pancreatic abscess, or a pancreatic cyst which has suppurated. He is well content to save his patient without gaining exact knowledge of the anatomy of the abscess.

One man's personal knowledge of these subphrenic abscesses must necessarily be limited, but a mine of inform-

ation can be discovered in the records of a large hospital, as can be seen in the wonderfully suggestive paper by H. L. Barnard, late of the London Hospital. I suggest an emulation by our new surgical registrar at the Melbourne Hospital.

Reports of Cases.

BILATERAL DUPLICATION OF URETERS.

IMPLANTATION OF THE URETER INTO THE BLADDER.

By **Ralph Worrall M.D., R.U.I., M.Ch.**
Gynæcologist to the Sydney Hospital.

The following interesting case should, I thought, be added to our common stock of experience:—

Mrs. Y. 46-VI. Para, presented herself on July 15, 1913, complaining of menstruation having been frequent and profuse in an unnatural way, with yellow discharge between periods, for more than eighteen months; for the past four months the hæmorrhage had been continuous. She had felt weak lately and had lost a little flesh.

Examination showed her to be a stout, somewhat anæmic, but otherwise healthy looking woman. There was an infiltrating, ulcerating carcinoma of the vaginal portion of a lacerated cervix, which was much enlarged, filling up the vaginal canal. The disease extended upwards to the cervico-vaginal junction, and invaded the vagina on the right. The right parametrium was considerably thickened.

On July 18, after preliminary application of sharp spoon and cautery, the radical operation for cancer of the cervix was performed. The operation was difficult owing to the obesity of the patient and fixation of the uterus. The ureters were traced to the bladder and isolated in their pelvic portion.

After removal of the uterus, examination of the lower ligatures led to the suspicion that on each side a ureter had been divided and tied; in so much however as careful examination by myself and my assistants, Dr. Cedric Bowker and Dr. Blaxland, of the apparently real ureters showed them to be unquestionably intact, the pelvic and abdominal wounds were closed, and the patient returned to bed, moderately collapsed from venous hæmorrhage during the operation.

Twenty-four hours afterwards it was found that the patient had passed only one ounce of urine in all, and although the pulse had somewhat recovered, she was evidently in a parlous state.

After consultation with my assistants and Dr. Jenkins, it was decided that we had evidently overlooked the possibility of double ureters, that the main ureter on each side had been tied, and that it was our duty to give the patient a chance by re-opening the abdomen, severing the ligatures, and implanting the ureters into the bladder. This proceeding was at once carried out. There was no difficulty in defining the ligatured ureters, as both were dilated above the ligatures. They were disintered, their ends split, and implanted into the bladder close to the other ureter on each side, which was plainly demonstrated about ¼ of an inch above and external to the original point of entry of the divided ureters. A peritoneal gauze drain was passed into the vagina, and the wounds again closed.

The patient bore this second operation, which did not take long, very well. An immediate improvement in her condition began. Twenty-five ounces of urine were drawn off in the first 24 hours.

After 48 hours a leakage of urine from the vagina was noticed in addition to an increased bladder flow.

Aug. 1., 12th day: Pus was found in the urine, and there was pain and tenderness in the kidney region on each side, with pyrexia. The abdominal sutures were removed, perfect healing having taken place.

Aug. 21: A month after operation the patient was able to walk on the balcony. The pulse was normal, but there was a rise of temperature each evening to 99 deg., 99.4 deg., and occasionally to 100 deg.; the urine was excessive in quantity, over 60 ounces, and contained pus and albumen, with a specific gravity of 1005, but there had been no leakage for several days. Both kidneys still moderately tender.

Sept. 16: Patient left the hospital. The leak had recurred, and she was obliged to wear a diaper. The urine still contained pus, and the temperature every few days ran up to 100 deg. or over at night. Bimanual examination showed the pelvis to be normal. By the speculum one could see a slight trickle of urine, high up in the vault, from the left angle of the scar.

Nov. 10th: Nearly four months after operation Dr. Blaxland reported that after returning home the patient had several rigors, with high temperature from an exacerbation of the pyelo-nephritis. Dr. Finckh had been called in, and had made an autogenous vaccine, of which eight injections had then been given with benefit. Two pieces of chromic gut, with knots which had been used in suturing the ureters to the bladder, had been passed per urethram. The leak was about the same, urine still contained pus.

Jan. 27, 1914: Five months after operation patient wrote to say she was very well, and thinking of going to England. No leakage for three weeks; urine clear; no temperature for long time.

March 11th: Seven months after operation the patient reported herself. No leakage, had gained flesh, urine clear, no vaccine for nearly three months, felt quite well. Examination showed everything normal.

I have looked up the subject of duplication of ureters in all available literature.

Cunningham merely says that the upper half of the ureter is sometimes doubled; more rarely the duplication extends throughout its entire length.

Wertheim, in five hundred radical operations for cancer uteri, found a double ureter four times. In one of the four, the condition was bilateral.

The best account will be found in the 1912 contribution from the Mayo Clinic in connection with the use of pyelography in the diagnosis of congenital anomalies in the kidney and ureter. Seven instances of double ureter are referred to, and one of three ureters; in one the condition was bilateral; in one the left ureter crossed the vertebal column, asd joined the right ureter, so that there was no ureter in the left pelvis.

Operators just now seem chary of implanting the ureters into the bladder owing to the frequent fatalities from pyelo-nephritis following this procedure.

These untoward results one would naturally expect when recalling the beautiful check valve action by which reflux from the bladder is normally prevented. Not alone does the ureter enter the bladder wall obliquely and lie embedded in its muscularis for a space of three-quarters of an inch, but there is in addition surrounding each orificium ureteris, the crescenic fold or valvula ureteris. In implantation this arrangement, constituting what is called the "factor of safety," is entirely absent, and therefore reflux from the bladder and infection would seem more likely to occur. Against this view, however, and encouraging the surgeon to hope for permanent as well as immediate good from a measure which in certain desperate straits he is practically forced to adopt, is an able and original paper in the Mayo Clinic, volume 1912, by Drs. Draper and Braasch, in which the authors conclude that "protection from reflux and infection is ensured as much by the physiological function of the ureter as by the check valve action at the meatus."

Cunningham, too, in the last addition, says: "It is probable that an exaggerated idea of the valvular nature of the openings of the ureters into the bladder is obtained by an examination of the parts in the dead subject."

In doing a Wertheim's operation last week I had a striking view of the peristaltic action of the ureter in performing its physiological function; it exactly resembled the movement of a caterpillar, and one could readily un-

derstand how this movement and steady downward propulsion of urine operated against an ascending infection and reflux from the bladder.

The lessons to be learnt from this case are: That anomalies are to be borne in mind if one is to avoid occasional disaster from their presence; also that the maxim of Horace, "nil desperandum," written 2000 years ago, is a good motto for the surgeon. One should beat a "Xenophon" retreat, that is, however desperate the condition, one should finish the operation in such a way as to give the patient a chance.

Reviews.

GYNÆCOLOGY.

The sixth edition of Dudley's Gynæcology has just been published. The preface says a thoroughgoing revision has been made paragraph by paragraph, while several chapters have been re-written.

The general plan is the same, that is, the subjects are arranged in pathological and etiological sequence, so that the student obtains a truer perspective of the diseases and injuries that affect the female genital organs. This plan has been adopted by Blair, Bell and other writers, and we have no doubt will come into general use.

The illustrations have been increased and improved. In many operations the reader can at once grasp each step of the technique by a study of the illustrations alone.

In regard to such important matters as cancer of the uterus, the subject is treated tersely and well, if not exhaustively. Both Schauta's and Wertheim's procedures are carefully described. The dictum of the former, that the glands may be disregarded, is evidently approved of by the author, in opposition to the opinions of other writers.

Dudley's operation for that troublesome infirmity Incontinence of Urine is still extolled. We have tried it and consider it is inferior to that described by Dr. Worrall last year in the Journal of Obstetrics and Gynaecology of the British Empire. To get a permanent result it is necessary to restore the sphincter. For retroversio uteri, the author figures and describes a modified Gilliam operation. He also speaks well of the Baldy-Webster, but says we "may ring down the curtain" on Alexander's operation and ventrisuspension. In this we do not agree with him. Suppuration is more likely to follow a Gilliam operation and also to be more serious.

For Chronic Endocervicitis, Schroeder's operation is recommended, if well done.

Inversion of the uterus is well discussed; for chronic inversion Spinelli's anterior vaginal lysterotomy is favoured rather than prolonged elastic pressure or violent taxis. In this we agree with the author; but no mention is made of Haultain's posterior abdominal hysterotomy, which we think far easier and safer than Spinelli's method.

In perinearrhaphy, complete and incomplete, the author discusses the principle which should govern the procedure in an instructive manner; due regard being placed on the necessity for uniting the separated levater ani.

Genital fistulae are very fully treated, in this section we are much indebted to Dr. Dudley for valuable hints. The author has a fondness for bringing together the opened-up broad ligaments in salpingectomy, hysterectomy and ovariotomy, sagittally instead of in the usual transverse direction. The author's method may serve to strengthen and tighten up the broad ligaments when these are unusually relaxed, but, as a rule, we think the usual transverse union preferable.

While there are many details which, in our opinion, are open to criticism, we consider the book is an indispensable work of reference for the general practitioner and specialist.

The Principles and Practice of Gynaecology.—By E. C. Dudley, A.M., M.D., Prof. of Gynaecology, North-Western Medical School. Seventh Revised Edition. Philadelphia and London: Lea and Febiger; (Sydney: Bruck and Thomson.) (Roy. 8vo., 29/- nett.

SURGERY.

Professor Bryan's text-book on the Principles of Surgery contains many items of interest to the reader, and like most American books is well illustrated.

Th chapters on inflammation and asepsis are well written, but concerning some surgical methods approved of by Professor Bryan, we cannot fall into line. For example, on pages 160 and 161 there are two illustrations to guide the reader as to the right and the wrong method of incising the finger. Anyone who has read Kananel's masterly work on Injections of the hand, must see that both of these methods are wrong.

This is only a small matter in a fairly large book, but it is an important matter all the same. For suspected pus in the finger the correct method is lateral incision, and not an incision in the palmar aspect of the finger, which is suggested and illustrated as being current by Professor Bryan.

Another matter. In this book the author speaks very hopefully of the open method of treating fractures. We do not criticize this statement in itself, but when one of the reasons for that hopeful prognosis lies in the fact that "the tissue of union is materially shortened" we cannot agree. Yet it is well known that delayed union often follows the operative treatment of fractures. But there is much good reading in the book, and in spite of some shortcomings and few faults, it is a work that contains much useful information.

PHYSIOLOGY.

The preparation of a fourth edition of Brubaker's work has furnished the opportunity for revision and the incorporation of new matter. New paragraphs have been inserted, among which may be mentioned those relating to the mechanical movements of the stomach and intestines, the digestion and absorption of the proteins, the viscosity, specific gravity and coagulibility of the blood, the venous pulse, the auscultatory method of determining blood pressure, the action of the pituitary and adrenals, etc. Space will not permit of an adequate analysis or criticism of its contents of a book of this character. Works on physiology do not differ materially in regard to the facts presented, but they certainly differ in their mode of presentation of the facts. In this respect the book may be recommended: it is written for students and medical practitioners, and in a style which renders a mental grasp of the processes and facts of physiology comparatively easy. In view of the close relation of modern ideas of immunity with physiological processes, it is rather surprising that no mention of this subject is made, though, of course, a complete account of immunity with all its branches would be quite out of place in a book of this description.

Notes on Books.

We have received from Dr. Watkins-Pitchford a reprint of his Annual Lecture, delivered to the Cape of Good Hope Branch of the Association at Capetown on February 9th, 1914. The subject dealt with is the Industrial Diseases of South Africa, and the majority of its contents consists of a full and detailed account of silicosis of the lungs, as met with on the Rand amongst miners. A complete description is given of the morbid anatomy and histopathology. Workers at public health and all general practitioners will find much valuable information in the subject of silicosis in the lecture, and we would especially recommend it to the notice of medical men on the Australian goldfields.

Principles of Surgery. By W. A. Bryan, A.M., M.D., Professor of Surgery, Vanderbelt University, Nashville, Ten., U.S.A. 1913. Philadelphia and London: W. B. Saunders and Co.: Melbourne: James Little. (Roy. 8vo., pp. 611—illustrated.)

A Text-Book of Human Physiology, including a section on Physiologic Apparatus. By Albert P. Brubaker, A.M., M.D. Fourth edition. Revised and enlarged, with one coloured plate and 377 illustrations. Philadelphia: P. Blakistoness Son and Co. Price, 12s. 6d.

The Industrial Diseases of South Africa: Being the Annual Lecture of the Cape of Good Hope (Western) Branch of the British Medical Association. By W. Watkins-Pitchford, M.D., F.R.C.S. Reprinted from the "Medical Journal of South Africa." 1914.

Medical Journal of Australia.

SATURDAY, JULY 4th, 1914.

The Medical Journal of Australia.

"The Medical Journal of Australia" enters with the present issue on its career as the official organ of the British Medical Association in Australia. Its functions are clearly defined. It has to record the progress of scientific medicine, and to assist in rendering the practice of medicine in all its branches of the greatest benefit to the people of Australia. These aims can only be attained by an enthusiastic co-operation of the whole profession. The history of recent events within the British Medical Association, and the splendid spirit of determination evinced by the members of the constituent branches augurs well for a successful achievement in both directions.

No journal can be thoroughly satisfactory from a scientific point of view unless the available amount of scientific matter, and especially of original articles, is well in excess of its actual needs. The importance of selection cannot be overestimated. If every practitioner in the Commonwealth will commit to writing the results of special observations or study of hitherto but imperfectly understood pathological processes, or of new methods of treatment, the educational value of the Journal should be greatly enhanced. And although the busy practitioner, living at some distance from the cities, has but few facilities for prosecuting investigations of this kind, his co-operation is none the less important. The general practitioner of Australia has a well-deserved reputation of being thoroughly efficient, an excellent observer, and a man of resource. For this reason he should, from time to time, be in a position to record interesting cases. Records of single cases are not only of practical importance, enabling other practitioners to recognise unusual and perhaps pathognomonic signs and symptoms of disease, but when taken together with the accounts of other cases, may contribute materially to academic medicine.

The communications read before the meetings of the branches will be published in abstract, together with the discussion which followed, and only when some distinct advantage is to be gained, owing to the nature of the communication or some special feature of the same, will they be published in extenso.

The columns devoted to a record of articles published in the prominent journals of other countries will gradually assume a different character, as the necessary arrangements for the reception of these journals and for the abstracting of selected articles are completed. In a similar manner, it is hoped that other modifications may be made in the journal, as the enlistment of energetic contributors is secured.

In regard to the second function of the journal, it should be pointed out that the practice of preventative and curative medicine should be organised in such a manner as to bring its full benefits within the reach of the whole community. Harmonious relations between doctor and patient, and a fair exchange for efficient services are essential to the well-being of both. The motto in medico-political matters of the "Medical Journal of Australia" will be that whatever is in the interests of the profession is necessarily in the interest of the community, and the converse. Propagandist schemes are frequently elaborated by certain sections of the public, and upheld by certain organs of the daily press for the veiled purpose of benefiting the few to the detriment of the masses. Notwithstanding the enticing form in which these schemes may be presented, they will be ruthlessly opposed. The experience of other parts of the Empire and of other countries will be utilised to assist the profession in arriving at wise decisions in those great problems which it has continuously to face. The policy on all important questions must in the last instance be determined by the members of the British Medical Association, who, in contrast to the members of many other callings, are an enlightened and highly educated body. The machinery for an ideal democratic management of professional affairs has been rendered much more efficient by the appointment of the Federal Committee. By a constant collaboration with the Branch Councils and the Federal Committee, the "Medical Journal of Australia" will be able to lay before the individual members of the

profession in their own homes the views of those who have given these important matters serious consideration. It will further be the means of announcing to every practitioner, and to the public, the determined policy of the majority of the medical practitioners in the Commonwealth, and of indicating the line of action which must be pursued by every member of the profession. Failure in medico-political action has always been due to an erroneous impression that an individual will be the gainer in the long run by attempting to improve his own position at the cost of the rest of his profession and of the community. The fallacy of this line of action has been demonstrated over and over again, and instances of mistaken selfish interest will become more and more rare in Australia, if the objects of the "Medical Journal of Australia" are successfully achieved. It is, therefore, to be hoped that the members of the profession will make free use of the columns of the Journal in matters of policy.

There is no doubt that but few medical practitioners are as facile with the pen as with the scalpel; but difficulty in writing is not a valid excuse for not contributing to the success of the Journal. A scientific journal is not judged according to its standard of literary excellence. It is the material—the essence of the thing—which is paramount; the form of expression is subsidiary.

The medical profession of Australia has determined to have one journal to serve it, federally. May the future prove that this decision has been a wise one!

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STATE-AIDED MEDICAL TREATMENT.

The New South Wales Government is pursuing a very energetic campaign in regard to the provision of medical treatment for the community. During the last few days various announcements have been made. Medical practitioners have been subsidized in Gulargambone and other out-back districts; a scheme for the enlargement of the State Coast Hospital to accommodate 1000 patients has been made public; the Minister for Public Health has declared himself in favour of the centralization of hospitals, and of the expenditure of money on the institution of increasingly large out-patient departments, and a big health legislation programme has been promised. The profession will, no doubt, take cognisance of these incidents and give them their full consideration, but they will, without doubt, distinguish more precisely than the Minister has done between administrative matters dealing with what is usually known as Public Health, and those matters which affect the medical practitioner in his relations to his patients. We note with some surprise, that up to the present no proposals in regard to vaccination legislation have been made. No doubt this form of legislation is not very popular, and might arouse real opposition from a class of politicians who would rather pander to public taste than enforce salutary measures for the good of the community. It will be necessary in the immediate future to deal critically with some of the proposals which the Government will lay before the House in the forthcoming session. At present it may be well for the members of the medical profession to remember that no adequate argument has yet been adduced to show that the charitable basis of hospital administration has failed in Australia, that the hospitals and the profession in collaboration with the Friendly Societies have succeeded hitherto in providing adequate medical attendance for the wage-earning section of the population, and finally that to interfere with the freedom of relations between the private practitioner and his patient is a very dangerous expedient, only to be resorted to in cases of absolute necessity. We learn that the Minister for Public Health is afraid that his policy in regard to subsidizing doctors might be misunderstood. This fear is not well founded, since it is quite clear that for the present, Mr. Flowers is limiting this part of his programme to places situated at least 20 miles from a district hospital. He may intend to stop the subsidy at a later date, when the area supplied by the State can afford to support a medical practitioner, but whether he will then be able to do so, is a moot question. It will be the duty of the British Medical Association to assist Mr. Flowers in terminating this arrangement as soon as the conditions warrant it. The Association will have a word to say to these matters before they go very far, and we are convinced that the profession will be strong enough to resist any movement which it believes would be harmful to the public.

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TREATMENT OF VENEREAL DISEASE.

A special committee of the Wellington Hospital and Charitable Aid Board has determined, after having considered a report issued by one of the committees of the recent Australasian Medical Congress, and a report drawn up by Mr. Hardwicke Smith, the medical superintendent of the hospital, to lay before the Minister for Public Health of New Zealand the views of the Committee. These views include the following provisions: That facilities be provided for the treatment of persons suffering from venereal disease at the hospital and dispensaries; that laboratory tests for syphilis, etc., be carried out without charge to the medical practitioners; that the local Branch of the British Medical Association be asked to co-operate with the Board in instituting lectures on this subject; that health lectures be delivered in schools, universities, young people's associations and defence forces; that the Minister of Defence have instructions to discourage girls from

visiting camps; that the shipping companies be asked to make grants to their medical officers for the special purpose of giving lectures on board on venereal diseases; and that the Education Department be urged to make the subject of sex physiology a compulsory subject on the syllabus for the teachers' examination.

THE SIGHT OF ENGINE-DRIVERS.

The Minister for Railways in New South Wales has recently proposed to modify the eyesight test in the Railway Department. No details are available as to the modification to be introduced. While the case of a man who, on the one hand, owing to increasing errors of refraction or other visual defect, has to be removed from his occupation as driver is without doubt a very hard one, the risk attaching to the continued employment of a man with defective eyesight to the travelling public is so great, that the interests of individuals cannot be taken into account. At present every driver up to the age of 45 is examined once in four years, and subsequently once in two years. Glasses are not permitted, as this means of improving vision in persons subjected to strain is highly unsatisfactory, unless the error is sufficiently corrected that tiring of accommodation cannot take place. The public has a right of insisting on a searching and repeated sight test, conducted by a competent ophthalmic surgeon, for every driver employed on the line.

MEDICAL EDUCATION IN AUCKLAND.

The proposal that the Auckland Division of the British Medical Association should undertake the establishment of medical education was considered at a meeting convened for the purpose. Dr. A. C. Purchas proposed that the Division should recommend the University College Council to arrange the subjects for the first professional examination, in order that the students might qualify in Auckland for other medical schools. This motion was agreed to. It was further resolved that the proposed clinical laboratory in connexion with the district hospital should be established as soon as possible.

CARE OF INEBRIATES IN WESTERN AUSTRALIA.

The State Government, in pursuance of the policy to remove all inebriates from the institution at Claremont for the treatment of the insane and from the Fremantle Gaol, have made arrangements by which three homes will be available for the care of inebriates. The premises which have been bought at Whitby for the purpose are now undergoing repairs and renovations, and are expected to be available in a month for the housing of those who have been convicted of habitual drunkenness and "indigent voluntaries." For others suffering from alcholism and willing to undergo treatment for the disease, a property has been bought fronting the Swan River, near Peppermint Grove. A further property is being inspected for the accommodation of indigent women inebriates as voluntary patients.

MENTAL WARDS AND GENERAL HOSPITALS.

The Inspector-General of the Insane for Victoria is in favour of the provision of psychiatric wards and has proposed that they should be instituted in the Melbourne Hospital. There can be no doubt that material advantage may be attained by the early treatment of mental disease. The principles which induced Kraepelin to institute this form of treatment have been generally recognised. On the other hand, success cannot be expected if the hospital is already overcrowded and the staff over-worked. The medical staff of the Melbourne Hospital has objected to the proposal on the ground that if carried into effect the efficacy of the work undertaken by the hospital would be materially interfered with. An alternative suggestion has been made that a special out-patient department should be established, with a mental specialist at its head, and that a limited number of selected cases should be admitted into one or other of the existing ward on the order of a member of the honorary staff or of the Medical Superintendent. They further pointed out that better results would in all probability be attained if early mental cases could be admitted into the acute mental hospital and into licensed private houses without any preliminary certification. A thoroughly efficient out-patient department should also be provided in connection with the acute mental hospital. The committee of management, at their monthly meeting held on June 16th, determined after hearing the views of the staff, to defer the further consideration of the subject. It is to be hoped that this body will realise the advisability of maintaining the objects of a charatible hospital, and not run the risk of imparing its utility by over-loading. Important as is the proper care and efficient treatment of patients suffering from early mental disease, it should be remembered that under ordinary circumstances the acute mental hospital, and not the general hospital, is the proper place for such cases.

ALCOHOLISM.

Towards the end of last year an International Congress against Alcoholism was held at Milan. Sir John Cockburn, who represented the Commonwealth, has informed the Minister for External Affairs that no fewer than 38 countries were officially represented, as well as about 80 Italian municipalities and 40 provincial administrations. The proportion of scientific and medical men in the various committees, and at the meetings, was exceptionally large. The keynote of the Congress was education and the overcoming of ignorance and superstition by creating an environment favourable to the gradual elimination of the evil. In the treatment of inebriates it was maintained that a cure was possible, and indeed, not difficult if the surroundings were favourable and the attendants devoted. Any medical treatment which did not take into account the moral factor was futile. In association with the Congress there was held an opium conference, at which Sir John Cockburn again represented Australia. The action of the Commonwealth in dealing with this and allied drugs was alluded to by several delegates as an example to the world.

Abstracts from Current Medical Literature

SURGERY.

(1.) Splenectomy in Egyptian Splenomegaly.

Richards ("Brit. Jour. of Surgery," Jan., 1914- states that a disease exists in Egypt, of which the essential features are progressive cirrhosis of the liver, enlargement of the spleen, and anæmia. This disease closely resembles that described in the literature as Banti's disease, but it is associated with fever, is probably due to an infection, and the hepatic cirrhois, instead of being a terminal stage of a "splenic anæmia," is an essential part of the disease from its commencement. Mild cases may recover; more severe cases end in death from hepatic cirrhosis with ascites and emaciation. Cases which have progressed to the stage of ascites are unfit for operation; they usually die in about six months. Severe cases which have not yet reached the stage of ascites may be much benefited, and sometimes cured, by removal of the spleen. The mortality of this operation in such cases is about 10 per cent. The chief operative risk is hæmorrhage, and this may best be met by a systematic division of individual vessels between ligatures. Although this affection, in its main features, coincides with Banti's disease, as this is usually understood, it presents certain marked differences from many of the cases which have been grouped under this heading. It is a very definite and uniform disease, and to call it Banti's disease would lead to its confusion with cases, some of which are probably of quite a different nature. Possibly, with fuller knowledge, these cases and the greater part of those now called Banti's disease will be given some name derived from their cause. Meanwhile neither name connotes anything except a group of symptoms; but the denotation of Egyptian splenomegaly is, at any rate, precise, and it refers to a group of cases all of the same kind, and to no others. In this disease splenectomy, of which the author reports a series of 22 cases, yields excellent results. The patients who are selected for operation all showed an enlargement of the spleen, anæmia, cirrhosis of the liver, and a low leucocyte count. They ranged between the ages of seven and fifty, but only one case was over thirty, and the average age was twenty. All except three were males, and they were all of the labouring class. The condition gradually progresses to ascites, emaciation, and death. Anæmia is never severe enough to cause death, and hæmatemesis is rare. The sufferers die apparently from exhaustion, the result of the long-continued drain brought about by intrahepatic obstruction of the portal system. In favourable cases the disease may be arrested spontaneously, but these cases do not come to hospital, or come for some other reason.

(2.) Operative Treatment of Genital Tuberculosis.

Cabot and Barney ("Jour. of the American Med. Association," Dec. 6, 1913), state that though tuberculosis of the kidney is now generally recognised as a primary lesion of the urinary tract, it is too little recognised that the genital tract also has its primary focus of infection. The term "genito-urinary tuberculosis" should be abandoned, and we should come to recognise tuberculosis of the urinary tract as primary in the kidney, while tuberculosis of the genital tract in the male is primary in the epididymis. The bladder and the structures of the neck of the bladder, including the prostate, are more or less common to both genital and urinary tracts, and the prostate may, therefore, be infected secondarily either in urinary or in genital tuberculosis. It is important, however, to recognise that the infection of the genital tract is rarely primarily situated in the prostate, and the writers are inclined to think that primary prostate tuberculosis will soon be relegated to the same class of surgical curiosities as is primary tuberculosis of the bladder. The proximity of the testicle to the epididymis makes its secondary involvement an exceedingly easy matter, and this complicates the opinion as to the relation between the epididymis and the testicle in regard to primary involvement. It is the authors' opinion that primary involvement of the testicle is rare; but they admit that it was involved to some extent in the process in over 40 per cent. of their cases of tuberculosis of the epididymis. The disease is primary in the epididymis, occasionally in the testicle, rarely in the prostate. The prostate is secondarily involved early in the disease, and ultimately in a vast majority of cases. The testicle is secondarily involved less often than the prostate and probably less early. The organs primarily involved show very little tendency to shake off the disease, while those in which it is secondary show a far greater power in this direction. The operation of election in genital tuberculosis is epididymectomy, including the accessible portion of the vas.

(3.) Neurectomy in Incurable Cancer.

A. P. Gould (Arch. of Middlesex Hospital, Oct., 1913) records the results of posterior spinal neurectomy in two cases of incurable cancer. The cases in question were instances in which malignant disease of the lower cervical spinal nerves and the theca spinalis were involved. The posterior roots of the nerves implicated in the disease in the neck were excised. The first patient died 25 days after the operation, but the disease was far advanced when she came under treatment. The relief afforded during the last weeks of the patient's life was considerable. In the second case marked improvement followed the operation, but the relief from pain was not complete. Gould suggests that the patient should be told when the operation is suggested that it will merely bring relief from pain, and will not restore the lost movements of the arm. He further suggests that sanction should be obtained for the amputation of the arm should full benefit be obtained.

(4.) Thyroid Tumour of the Clavicle.

Radley and Duggan ("Brit. Jour. of Surgery," January, 1914) report the case of a man, aged 46, who had an adenoma removed from the isthmus of the thyroid two years previously. He then presented himself with a large tumour of the clavicle, which had been present six months. Total excision of the clavicle was performed, and the growth on examination was proved to be a secondary thyroid carcinoma.

Medication through the Lateral Sinuses.

(5.) Charles A. Ballance ("Lancet," May 30, 1914) describes the method of introducing salvarsanized serum or other remedies into the subarachnoid space. He has carried out this infusion on five occasions in the treatment of cerebral syphilis. He states that the injection of salvarsanized serum into the subarachnoid space of the spinal theca has been followed by improvement in certain early cases of spinal syphilis. The same injection is less efficacious in cerebral syphilis. He raises the question whether direct introduction of the medicament into the subarachnoid space of the brain might not be followed by considerable benefit. Arguing on anatomical grounds, he finds that the serum thus introduced would undoubtedly reach the nerve cells. Certain considerations led him to regard the lateral ventricle as the best site for the injection. A detailed account of the apparatus and of the method of operation chosen is given. A trephine opening is made to the right of the middle line, just in front of the bregma. The dura having been opened, the inner surface of the right cerebral hemisphere is gently drawn outwards. The anterior cornu of the lateral ventricle is situated roughly 2½ to 2¾ inches from the surface of the scalp. A cannula is passed through the anterior part of the corpus callosum, directly into the lateral ventricle. The cannula is provided with a round-ended stylet, which cannot injure any vessel in its passage through the brain substance. After the stylet has been withdrawn, the cannula is connected with a graduated

glass vessel by means of a rubber tube. At first normal saline solution and then salvarsanized serum is infused. The author states that 90 c.cm. of fluid were infused in about 20 minutes, and that the pressure varied from 6 to 18 inches. No ill effects of the injection were noticed. In preparing the salvarsanized serum, he utilised the serum obtained from blood, drawn one hour after the intravenous injection of neosalvarsan. To this 0.009 gramme of neosalvarsan was added, which corresponds to about one-hundredth of the intravenous dose. The author suggests that this method of introducing remedial agents into the cerebral fluid might be extended to other diseases of the brain besides syphilis, such as sleeping sickness, meningitis, tetanus, and epilepsy. He refers to the work of Marinesco and Minea, Robertson, Swift and Ellis, Sicard and Lapointe, and Foerster, on the same subject.

GYNÆCOLOGY AND OBSTETRICS.

(6.) Treatment of Dysmenorrhœa by X-Rays.

Hernaman-Johnson ("Practitioner," May, 1914) describes several severe cases of dysmenorrhœa treated successfully by X-rays after the usual operative procedures and medicinal remedies had failed. He states that no marked improvement followed until the third menstrual period after the commencement of treatment, but that once started the good effects continued for some months after the applications had been stopped. As to treatment, it is his practise to irradiate both from the front and from the back. He uses the hardest tubes and filters through 1.5mm. aluminium. He uses only three "ports of entry"; tube over upper sacral region, patient on face; and alternately over each ovarian region from the front, the opposite half of the abdomen being protected. The anticathode is 12in. from the skin. Each area gets one-eighth B tint saborand per week, the pastrile being placed on the skin. He lays great stress on the fact that treatment should continue for three months, and that immediate improvement should not be expected. He states that the skin is never more than slightly browned, and that there is absolutely no risk of producing sterility. The only effect is that the interval is slightly lengthened. The pubic hair will fall out unless it is specially protected, but always grows again. As to the mode of action of the rays, he suggests that just as a disordered and hyperactive thyroid produces palpitation, tremors, exopthalmos and general weakness, so an abnormally functioning ovary may, by producing a secretion altered in quality or in quantity, cause a syndrome made up of excessive hæmorrhage, severe menstrual and intermenstrual pain, headaches, digestive disturbances, and general misery. Furthermore, just as the rays have power by regulating the supply or quality of the internal secretion of the thyroid to cause a symptomatic cure in most cases of exopthalmic goitre, so they have a similar regulating power in regard to the internal secretion of the ovary, and may thus account for the apparent cures of dysmenorrhœa recorded.

(7.) Syphilis in Relation to Uterine Disease.

Whitehouse (Proc. of the Royal Society of Med., Jan., 1914) suggests that syphilitic lesions of the corpus uteri are not so rare as has been regarded in the past. He states that, apart from the occasional record of a few syphilitic lesions affecting the cervix, very little has been written on the subject, and the literature has in the past exempted the body from attack by spirochaeta pallida. He maintains that most cases of chronic metritis or fibrosis of the uterus are due to syphilis. He feels confident that before long the spirochaeta pallida will be found in the menstrual discharges and tissues of the body of the uterus. He attributes his failure to demonstrate the organisms in the tissues to the small number present, and, in future, proposes to employ smear preparations made from an emulsion of the tissues. He points out that only within the last few months has the organism of syphilis been found in the central nervous system in cases of tabes dorsalis and general paralysis of the insane, notwithstanding that this had long been suspected. His conclusions are as follows: (1) That it is important to recognise the existence of a true syphilitic fibrosis of the uterus; (2) that it is essential to test by the Wassermann reaction all patients suffering from chronic metritis and fibrosis of the uterus; (3) that it is possible that some cases of non-malignant pyometra are also of syphilitic origin; and (4) it is suggested that the menstrual blood be examined for spirochaeta pallida during the secondary stage of syphilis, since the intracellular bodies described by Ross and McDonagh have already been demonstrated and are regarded by some as a stage in the development of the specific spirochaeta.

(8.) Uterine Endoscopy.

Heinberg (Surg., Gynæc., and Obstet. April, 1914) describes a new uteroscope invented by himself for the closer study of intrauterine conditions. The instrument consists of an endoscopic tube, an irrigating attachment, obturator and lighting attachments. His examinations have been conducted under general anæsthesia, but he proposes to resort to local anæsthesia of the cervix and uterine cavity by the injection of novocaine alone or combined with adrenalin. After securing thorough asepsis of vagina and uteroscope, a self-retaining uni-valve speculum is introduced into the vagina to retract perineum, the cervix is drawn down by a double tenaculum and the cervical canal dilated. Uteroscope is then introduced, and if there is any bleeding hot saline is run through before observations are made. He asserts that through its employment it is possible to distinguish with a greater degree of certainty such pathologic conditions as glandular hyperplasia, uterine polypi, retained products of conception, submucous fibroids and malignant tumours of the endometrium. His conclusions are as follows: (1) That there is a well-recognised need for methods of greater precision in the diagnosis of intrauterine disease; (2) that greater accuracy in the diagnosis will diminish the resort to unnecessary and destructive operations; (3) that uteroscopy affords information concerning changes to the endometrium in vivo not obtainable by any other method of investigation; (4) that uteroscopy, like similar diagnostic procedures, has its limitations and definite contra-indications; and, finally, that its use should be limited to those cases in which it can elicit valuable information without endangering the health or life of the patient.

(9.) Abderhalden's Pregnancy Reaction.

E. Abderhalden and A. Foder (Muench. Med. Woch. 7 April, 1914) have sought further evidence to disprove Flatow's statement that every serum is able to split up placenta. They found that the results of the dialysing method and of the optic method coincide in showing that the reaction is specific for the serum of pregnant women, and now are attempting to confirm these results by determining the nitrogen content of the dialysate. The method used is Folin's modification of Kjeldahl's test. From the series of experiments recorded, it appears that a considerable excess of nitrogen was found in the dialysate of serum plus placenta, as compared with serum alone, when the serum was derived from a pregnant woman, while the difference between the two values is but slight in the non-pregnant cases. These results corresponded in all cases save one with those of the ninhydrin test. They are working out other methods of confirming these results.

E. Schiff (Muench. Med. Woch. 7 April, 1914) has employed Abderhalden's dialysis test for pregnancy and finds that the reaction is specific, that the ferments demonstrated in the blood of pregnant women split up placental tissue alone, and that if properly carried out, the test is capable of giving reliable information when the clinical diagnosis of pregnancy is doubtful. In one case of extra-uterine gestation, the reaction proved negative, but the operation revealed a dead and macerated ovum. The serum of pregnant women split up placenta in every case, but no other tissue. The serum of gynaecological conditions in non-pregnant subjects did not split up any tissue at all, while the serum of menstruating women also gave a negative result.

THE HISTORY OF MEDICAL JOURNALISM IN AUSTRALIA.

By **J. H. L. Cumpston, M.D., D.P.H.,**
Director of Quarantine.

Medical journalism in Australia may be said to have commenced in 1804, when Dr. Thomas Jamison wrote for public information an article on smallpox, which was published in the "Sydney Gazette" on Sunday, October 14, 1804. As this is the first recorded article on a medical subject written by an Australian medical man, and published in the public press of Australia, it is worth quoting here in extenso:—

> An erroneous opinion in relation to the smallpox being generally received, and as an inference deduced therefrom equally fallacious with the principle upon which it is founded, I conceive it a duty incumbent on me as principal surgeon of this colony to remove prepossessions which, if adhered to, must be productive of the most calamitous consequences to the rising generation of these Colonies.
>
> First, it is conceived by a number of parents and others having the care of children that they have had the smallpox in a natural way; and secondly, that little danger is to be apprehended from its effects in this climate. In refutation of a conjecture fatal to be indulged, I must observe, the disease by some considered as the smallpox is no other than an eruptive appearance on the skin, proceeding from climate and other constitutional causes. Others may be deceived by the chicken-pox, an error that may be readily imbibed by those who are not conversant in the natural smallpox; for I most positively affirm, on my own personal knowledge for ten years past, that not a single instance of the latter disease has occurred in this country.
>
> It is generally accredited by the medical gentlemen of the colony on its first establishment that the smallpox had been introduced among the natives by the crews of the French ships then lying in Botany Bay; but since that period no vestige of that disease has ever appeared.
>
> In contradiction to so ridiculous an idea as that the natural smallpox should not carry with it, and be productive of effects baneful and destructive in the extreme. I have here to observe that in the Cape of Good Hope (the latitude being nearly the same with this place) the inhabitants dread the appearance of the smallpox as in other countries they do a plague, from the fatal malignity of its tendency and effects; and I have no doubt that should the disease ever visit this colony in a natural state, and particularly in the summer season, it would carry off nine-tenths of those who might receive the infection.
>
> From the foregoing facts and circumstances I would earnestly recommend parents to avail themselves of the blessing held out to them by the provident care of the parent country by having their children inoculated with the vaccine or cow pock—an infallible preventative of that loathsome, disgusting, and too-often fatal disease when taken in the natural way.
>
> It is almost needless to remark further on the particular virtues and properties of a discovery announced and recommended to the public notice, for the general benefit, from such high and indisputable authority; I shall only remark that the preventative qualities of the Cow Pock are incontrovertibly established; no preparatory regimen or extraordinary care are requisite in its application or progress; it is attended by no sort of danger or external blemish; wherefore should parents delay to embrace the salutary benefit now tendered gratuitously, and the vaccine infection be lost, the most distressing reprehensibility may accrue to them from their remissness in the preservation of their offspring, whose destruction hereafter may be reasonably apprehended to ensue from the smallpox should it ever visit this colony in a natural state.

There may have been other articles on medical subjects contributed by medical men to the public press, but there was no attempt at the regular issue of a purely medical journal in Australia until the appearance in 1846 of the "Australian Medical Journal." This was not the journal which now bears the same name, as it originated in Sydney. It was published at first by a syndicate, amongst whom was Dr. Isaac Aaron, who appears to have been the leading spirit throughout, and who, in May, 1847, assumed the complete control, as is indicated by the following extract:—

> May 1, 1847.—A change of proprietorship . . . . and we have the gratification of stating that we are now "perfectly uncontrolled" and prepared to continue in the same honest and fearless course . . . . Subscribers to the "Australian Medical Journal" are requested to take notice that no receipt for money will be valid unless signed by me.—Isaac Aaron.

This journal first appeared on August 1st, 1846, and the last number was issued on October 1st, 1847, the issue being a monthly one of 12 pages. Beyond occasional vigorous leading articles by Dr. Aaron as editor, it showed no noticeable characteristics, containing original articles, digests of articles appearing in other journals, and local news. There are recorded occasional quarrels between the medical men in Sydney, and reference is made to "bickerings and squabbles over the election of a physician to the Benevolent Asylum" (p. 13). One statement is of interest—"One of our aristocracy refused, until threatened with the law, the moderate charge of £10 for travelling three times a hundred miles to relieve his sick overseer." The "Australian Medical Journal" acted as the official organ of the Port Phillip Medical Association, which was founded in 1847.

There is a copy of this journal in the Sydney Public Library. References to it will be found in the New South Wales Medical Gazette" as follows:—

> Some twenty years ago an attempt was made by a member of the profession, since deceased, to establish a medical journal in this colony. It is unnecessary now to enter into details respecting this publication and its want of success. It was probably premature. At all events, after an existence of twelve months, entailing considerable pecuniary loss on its then proprietor, it died of inanition. It was not supported by the profession as it was hoped it would be. (N.S.W. Med. Gaz., 1870, p. 14).
>
> We have lately had the opportunity of reading the "Australian Medical Journal, published in 1846, printed by Mr. William Baker, and edited by I. Aaron, M.R.C.S. As an aid to the history of the profession and the progress of medical and surgical knowledge in the colony, this periodical is most useful, and we regret to hear that it is now out of print. (N.S.W. Med. Gaz., 1872, p. 120.)

The next journal to be established carried the same name, "The Australian Medical Journal," but was published in Melbourne. This journal was established by the Medical Society of Victoria, which elected the editors and managing committee. First published in Jan., 1854, it has continued in existence under different titles for 54 years, ceasing only in order to be merged, for greater usefulness, into the Federated Australian publication, of which this present is the first number. This Australian Medical Journal began as a quarterly issue; in 1864 it was issued monthly, and continued as a monthly publication until July, 1911, when it was converted into a weekly journal. It has been always the official organ of the Victorian Branch of the British Medical Association, and has been officially published by that Branch. In 1896 the journal was amalgamated with the "Intercolonial Quarterly Journal of Medicine and Surgery," and the title was altered to the "Intercolonial Medical Journal of Australasia." This title was again altered in January, 1910, to the original title of "Australian Medical Journal," the editorial note on the change being as follows:—

> For a long time past it has been evident that this title is not only cumbrous, but incorrect. Since the establishment of federation the word "colony" has ceased to be applicable to the territorial units of the Commonwealth, and the term "Australasia" has no administrative existence. The colonies of aforetime have become united as States forming a Commonwealth of Australia. We therefore propose that, beginning with the January issue of 1910, the journal shall revert to its old designation of the "Australian Medical Journal," and ask all concerned to take note of the present intimation."

The list of editors of this journal includes the names of some of the most respected members of the medical profession in Victoria. Doctors Maund and Black were the first editors; Dr. Wm. Thomson was editor from 1859 to 1861, and he was succeeded by Dr. J. Neild, who directed the course of this journal through the most stormy period that has been known in the medical politics of Victoria. Dr. Neild remained editor for seventeen years, from 1861 to 1878, and was succeeded in turn by Professor (now Sir Harry) Allen, Doctors Jamieson, Moore, Syme, Stawell, Wilkinson, Lewers, and A. J. Wood.

Victoria produced the third in the series, namely the "Medical Record of Australia," which appeared first on May 1st, 1861, and continued to appear until December, 1863. This journal was issued twice monthly, and was edited by Dr. C. E. Reeves. It consisted largely of extracts from current medical literature, together with local topics of more or less interest. The original articles were almost entirely from the pen of the editor himself, and Mr. J. G. Beaney—the latter a well-known member of the medical profession of the period. The difficulty in obtaining contributions is expressed by the editor in the issue of September 2, 1861 (the ninth number in succession of issue), and this difficulty was such as to necessitate a reduction in the frequency of issue from fortnightly to monthly. A feature of the last two years of publication was a series of articles by the editor on "Diseases of Australia." These articles give evidence of careful preparation, but the material is mostly speculative rather than exact.

At the beginning of the second half-year of issue the editor remarks as follows:—

> The Editor has much pleasure in laying before the profession the first volume of the "Medical Record." . . . . He would have wished to increase the size of the journal next year, but the high rate of wages renders this impossible. He wishes it to be understood that he has not started the journal as a commercial speculation. (1862, p. 145.)

From this it appears that the journal was a private venture. The pride the editor felt is expressed in the "Address" in the last number of the second volume:—

> The Editor has much pleasure in laying before the profession the second volume of the "Medical Record." It will, he feels assured, be a source of pleasure to those who take an interest in the advancement of medical and surgical science in the colony to learn that nearly all the articles which have appeared in the journal have been reprinted in the European journals. (1862, p. 133.)

This journal, being a private venture, and therefore dependent on the exertions of one individual, naturally came to an end when the individual was incapacitated. The following note announces the conclusion of the venture:—

> Dr. Reeves begs to state that this will be the last number of the journal that he will publish. The state of his health renders it necessary that he should discontinue mental labour for a time. (1863, p. 138.)

After an interval of twelve years, however, this journal reappeared, the name being slightly changed, and it became the "Melbourne Medical Record," the first number of which appeared on February 27, 1875, this number being known as No. 1, Vol. 4. It was published weekly until October, 1875, when it commenced to appear fortnightly. No. 5 of Vol. VII. is the last number of which there is any record. The publisher was R. T. Clarke, of Fitzroy, Melbourne.

Another medical journal launched about the same time was the "Medical and Surgical Review—Australasian." This was published in Melbourne by F. F. Baillière, but the copies available contain no internal evidence to indicate either the identity of the editor or the society or body which promoted it. It appeared on October 1, 1873, and was published monthly until April, 1875, and consisted largely of articles and memoranda on clinical subjects. Mr. J. G. Beaney appears to have been associated, as a frequent contributor, with this venture. The last reference to this journal that can be found is a mention of its title amongst the list of exchanges of the "New South Wales Medical Gazette," in July, 1874.

A journal having almost the same name, viz., the "Australasian Medical and Surgical Review," was published in 1863, the first number being issued in March of that year, and the last in January, 1864. This short-lived journal appeared monthly, being published by Messrs. Ferguson and Moore, of Melbourne. There is nothing in its pages to indicate who was responsible for its appearance, and as it does not refer to any society or public body, it may be presumed that it was a private venture. The only copy the present writer has seen bears the autograph of Dr. C. E. Reeves, and, in view of Dr. Reeves' known activity in the direction of medical journalism the suspicion that he may have been the author of this periodical also is justified.

In 1869 there was considerable strife within the ranks of the medical profession in Melbourne, and the profession had been divided into two camps—the Medical Society of Victoria and the Medical Association of Victoria. The former continued the publication of its official organ, the "Australian Medical Journal," and the latter, in 1869, established its own journal, the "Australian Medical Gazette." The centre of the conflict between the two bodies was the office of Coroner, and the gentleman (Dr. Youl) who held that position. The latter journal was purely medico-political in origin, and strongly so in character, and its policy appeared to consist largely of attacks on Professor Halford and Dr. Youl, the Professor of Pathology, and the City Coroner respectively. It first appeared on January 30, 1869, and is known to have been published until December, 1871, as a monthly publication throughout. There is no internal evidence of the identity of the editor, but Dr. C. E. Reeves, who owned and edited the "Medical Record," was a frequent contributor. No copies of this journal subsequent to 1871 are known, but it is mentioned in the April number of the "New South Wales Medical Gazette" of 1872 amongst the list of exchanges, probably because it was received too late to be mentioned in the December number. The "Intercolonial Medical Journal," in 1906, states that it was published "for four years," but it is thought that this must be a mistake.

The second journal to be published in New South Wales was the "New South Wales Medical Gazette." This appeared in October, 1870, and was then managed and owned by the medical officers of the Volunteer Force, and was edited by three of their number. Subsequently, in October, 1871, both the ownership and the editorship passed into the hands of Dr. Frederick Milford, who had been one of the three original editors. In March, 1875, a new editor was appointed—Dr. Samuel T. Knaggs. This was a strong and vigorous journal, full of interesting and stimulating articles, and it bears strong evidence of having been excellently managed. It had, however, only a brief existence, and it disappearance is somewhat unkindly chronicled by the "Australian Medical Journal" of 1876 (p. 324) as follows:—

> It is only recently that the "Medical Gazette" in New South Wales, which had struggled with difficulties for four years, finally yielded to what seemed to be its fate.

It was published monthly until September, 1875, each number containing 32 pages.

The direct successor of the "New South Wales Medical Gazette" was the "Australian Practitioner." This was entirely a private venture, the editor and proprietor being Dr. Samuel T. Knaggs, who had been associated as editor with the New South Wales Gazette. Dr. Knaggs issued the first number of the "Australian Practitioner" in October, 1877, and it appeared thereafter monthly until October, 1878, when it ceased. The difficulties attending the issue of a medical journal as a private speculation formed the reason for the cessation of this one. Dr. Knaggs records that a specimen copy of the first number of the journal was forwarded free of charge to every medical practitioner in the Australian colonies, and of each subsequent issue 300 copies were gratuitously distributed amongst professional non-subscribers. Notwithstanding all this advertisement the balance-sheet for the first year showed that the expenses for the first year amounted to £122, and the receipts were £21, of which £13 was made up by subscriptions, and £7 10s. by advertisements.

This journal was the nearest approach to a public health journal that has been issued in Australia.

In the last number of this journal appears a strong plea for some form of federation between the New South Wales and Victorian Medical Societies.

In 1881 the "Australasian Medical Gazette" was commenced in Sydney, the first number being issued in October. This was published as the official organ of the Victorian, South Australian, and New South Wales Branches of the British Medical Association. It owed its origin to the enterprise of Mr. Ludwig Bruck, the well-known medical agent in Sydney, who conducted it as a private venture from its commencement until 1894, when the New South Wales Branch of the British Medical Association purchased it from him. The issue of January, 1895 was the first under the new proprietorship, and the letter from the Secretary of the Association, which appears in that number, conveyed a well-deserved tribute to the energy of Mr. Bruck, and to his service to the profession in maintaining this journal.

The Gazette has been the official organ of all the branches of the British Medical Association in Australia, except the Victorian, since that time, and has been probably the most successful journal which has hitherto been issued in Australia. The editors have been in succession Dr. F. Milford, the Hon. J. Mildred Creed, M.L.C., Dr. Samuel T. Knaggs, and Dr. G. E. Rennie, while Dr. Cleland acted as assistant editor since 1911, when the publication became weekly.

The Gazette, like its contemporary, the "Australian Medical Journal," ceases only in order to be incorporated into the new Australian Journal.

In 1894 the "Intercolonial Quarterly Journal of Medicine and Surgery" was commenced in Melbourne. The origin of this journal can be traced to a resolution carried at the Intercolonial Medical Congress, held at Sydney in 1892, which was as follows:—"That it is desirable to found an Australian Medical Journal." A movement was started in Melbourne to give effect to the desire thus expressed, and this quarterly was commenced. It contained original articles, and was fairly successful during its first year of issue. In 1896, however, it was decided to amalgamate this journal with the "Australian Medical Journal," and the combined periodical was known as the "Intercolonial Medical Journal of Australia."

Finally mention must be made of a journal which had a very brief existence, appearing for only three monthly numbers. "The Journal of the Sanitary Inspectors' Association of Western Australia" appeared first in March, 1908, and ceased with the May number of the same year.

The following is a tabulated statement of the medical journals published in Australia:—

1. Australian Medical Journal, N.S.W., ... 1846-1847
2. Australian Medical Journal, Vic., afterwards Intercolonial Medical Journal, afterwards Australian Medical Journal 1856-1914
3. Medical Record of Australia, Vic. ..... 1861 1863 afterwards continued as Melbourne Medical Record, Vic. 1875-1877
4. Medical and Surgical Review-Australasian Vic. 1863-1864 1873-1875
5. Australian Medical Gazette, Vic. 1869-1871
6. New South Wales Medical Gazette, N.S.W. 1870-1875
7. Australian Practitioner, N.S.W. 1877-1878
8. Australasian Medical Gazette, N.S.W. 1881-1914
9. Intercolonial Quarterly Journal of Medicine and Surgery, Vic. 1894-1896
10. Journal of the Sanitary Inspectors' Association of Western Australia 1908

New South Wales produced four, and Victoria five of the Australian medical periodicals. It is interesting to note that medical journalism in Australia owes much to two members of the profession, Dr. Samuel T. Knaggs being financially interested in and the moving spirit of the "New South Wales Medical Gazette," the "Australian Practitioner," and also for several years editor of the "Australasian Medical Gazette"; and Dr. C. E. Reeves, who was equally associated with the "Medical Record," "Australian Medical Gazette," and possibly also the "Medical and Surgical Review."

The publication of articles of medical interest, however, has not been confined to purely medical journals. The published proceedings of the Royal Society in each of the States have contained many articles on many medical subjects. So early as 1858 the "Sydney Magazine of Science and Art" contained a number of articles on medical subjects, more particularly in the sphere of public health. The "Transactions of the Intercolonial Medical Congresses," commencing in 1887, contain a large amount of valuable medical literature. The daily public press also has throughout the whole period of Australian journalism contained many contributions on medical subjects.

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British Medical Association News.

SCIENTIFIC.

A meeting of the New South Wales Branch was held at the B.M.A. Building, Sydney, on Friday evening, 26th June, 1914; Dr. Armstrong in the chair.

Dr. J. Flynn read a paper on the morphology and physiology of the caecum, with lantern illustrations. The second portion of his communication, dealing with intestinal toxaemia, was postponed till the next meeting, as was the discussion on the full subject. The first portion of Dr. Flynn's paper will be published in extenso in a subsequent issue of the Journal.

Dr. M. C. Lidwill read a paper on recent advances in the administration of anaesthetics. Dealing with intravenous anaesthesia with ether, which he condemned chiefly on account of the small margin of safety, he stated that the large quantity of saline solution, which has to be introduced into the vein, produces pulmonary oedema and all the attendant symptoms met with in drowning. A further disadvantage of the introduction of large quantities of saline solution into the circulation is that the clotting power of the blood is greatly diminished and hæmorrhage becomes troublesome. He next dealt with Meltzer's intratracheal ether administration. The method he employs is to anaesthetize the patient in the usual manner with ether, and as soon as the patient is asleep the head is placed in the mid-line and a No. 12 gum elastic catheter bent on a stylet is passed between the vocal cords. A whistling sound is heard as soon as the catheter is in place. Dr. Lidwill spoke of the technical difficulty in connection with the introduction of the catheter. A Meltzer's original apparatus is then attached to the catheter and by means of a foot-bellows, a pressure of about 20 to 25 mm of mercury is maintained. The air blown in is charged with ether vapour. The blowing is intermitted every 15 to 20 seconds. One of the advantages of this method is that it can be carried out with the patient lying in any position. In one case he had his patient lying on her abdomen, while the occipital bone was being removed. The anaesthesia is very even, very easily controlled, and the ether can be washed out of the lungs at any time. He prefers to give just enough air and ether to support a feeble respiration; if the breathing stops, all that is necessary is to turn off the air supply, so that a condition of apnœa is induced with the result that the patient begins to breathe again in a few seconds. He regards intracheal insufflation as indicated in operations on the throat and nose, when laryngeal plugging is undesirable; in operations on the head and neck; in all operations in which the position of the patient is inconvenient for ordinary methods, such as laminectomy, and in operations on the lungs, thorax, and upper part of the abdomen. In conclusion he dealt with the rectal administration of ether. This can be carried out by the introduction of either ether vapour or a mixture of ether, and olive oil. He finds both methods unsatisfactory and dangerous.

Dr. J. W. Bean agreed with Dr. Ridwill that venous anæsthesia is far too dangerous to be employed. He related his experience of two cases of insufflation anaesthesia induced by Dr. Fiaschi. In the first case the anæsthesia was almost perfect. He was much struck by the admirable relaxation of muscles and the very slight respiratory movements. He doubted whether it was possible to fix the amount of ether that would be required in any given case. This would be determined by the quantity and quality of the blood, the state of the nervous system, the patency of the air-ways, etc. In the second case, the anaesthesia was not so good. He attributed this to emphysema. The signs noted were cyanosis, swelling of the veins on the forehead, and sluggish, dilated pupils. He raised the question of the advisability of warming the ether, on the ground of Brunton's observation that the bronchioles contract under the influence of cold. Dr. Bean further dealt with the various forms of vomiting met with during and after operations. He recognises a surgical, a postural, and an anaesthetic form. The causes of the latter were (1) oversecretion in the air passages, due to ether loading; (2) deoxygenation of the tissues (cyanosis), and (3) the nauseating effect of the ether itself. Atropine could be given to lessen the mucus secretion, and the essence of bitter orange would be found to cover the nauseating smell.

Dr. R. H. Todd said that he had recently had experience of anaesthetizing a violent patient by placing him in a strong box and pouring a large quantity of chloroform into it. He mentioned incidentally that the patient was a tiger.

Dr. T. Fiaschi spoke of his experience which extended over three and a half years and involved the anaesthetizing of 150 persons and 130 dogs by Meltzer's insufflation method. He showed a number of pictures illustrating the method, the postures, and the apparatus. He considered that the technique described by C. L. Burke was still the best. He advocated very warmly the use of a Jackson's laryngoscope. He disapproved of the use of soft catheters; he always employed a silk-web catheter, marked at 26 cm from the tip. A 23 (French scale) was the size he preferred. Referring to the second case spoken of by Dr. Bean he explained the unsatisfactory results as being due in part to technical errors. He emphasized the necessity of having a good supply of ether in the bottle, and advocated simplicity in regard to the apparatus. Complicated innovations were unnecessary and disadvantagous.

Dr. Nash stated that he had operated on a very large number of cases anaesthetized by the insufflation method by Dr. Fiaschi. As soon as the catheter was in place in the larynx he felt absolutely confident as to the safety of his patient's life. He regarded the laryngeal reflex as a sure sign that the catheter was in place. In his opinion the safety of the method was due to a large extent to the cutting out of what Meltzer termed the "death space." This was the space between the lips and the vocal cords. If at any time an excess of ether accumulated in the trachea, bronchi, or lungs, this could be removed by wash-

ing out with air. Dealing with the technical aspect, he stated that the amount of ether used was considerably less than with the ordinary method. There was no waste at all, and 2 or 3 ounces per hour usually sufficed. He did not think that there was any necessity, at all events as far as this climate was concerned, of warming ether. The previous speakers had certainly not exaggerated the advantages. The responsibility of the operating surgeon was enormously diminished.

Dr. W. J. Stewart McKay spoke of a desperate case in which Dr. Fiaschi employed the insufflation method. The haemoglobin value was only 20, and he could not imagine a worse case for general anaesthesia. He performed the operation of hysterectomy. Half way through the operation, Dr. Fiaschi reported that no pulse could be felt; but so great was his belief in the method that he completed the operation. When returned to bed, the patient had a fairly good pulse. He regarded the introduction of this method as the greatest advance ever made in surgery.

In his reply Dr. Lidwill pointed out that there was good evidence that lung complications should not be regarded as a contra-indication. No damage of the lung resulted when dogs were subjected to experimental insufflation on four or more consecutive days.

MEDICO-POLITICAL.

A Council Meeting of the Victorian Branch was held in the Medical Society Hall, East Melbourne, on June 26th, 1914. In the absence of the President—Dr. A. L. Kenny—Dr. A. V. M. Anderson occupied the chair.

Ethics of Advertisements.

Numerous inquiries had been received during the year as to the ethics of advertising in country newspapers. The matter was referred to the Divisions for an expression of opinion, and the decision of the Council will be largely guided by the replies received.

National Insurance.

With regard to the inquiries of the Government Statist from Medical Associations prior to the introduction of a scheme of National Insurance, it was decided to submit the same replies to have been sent in by the Medical Committee of the B.M.A.

New Members.

The following gentlemen were elected members of the Victorian Branch:—Dr. Abel Rollason, Heidelberg; Dr. G. A. Birnie, Kyneton; Dr. L. A. Wright, Oakleigh.

The offer of Dr. J. F. Nelly of a number of books to the Library of the Association was accepted with thanks.

Organisation.

A contribution of £619 19s 6d towards the Compensation and Organization Fund was received from the Ballarat Division. The same Division has promised a further sum of £80. The matter of urging on the conference with the Friendly Societies' Association was referred to the Organization Sub-Committee.

Arrangements were made for dissuading medical men in Victoria from accepting appointments in the Kurri Kurri and Weston Districts of N.S.W. The Council had received warnings that delegates were proceeding to Melbourne (from those places) to try and fill vacancies there.

Workers' Compensation Act.

Dr. Ramsay Webb drew attention to the fact that the Workers' Compensation Act would soon be coming into force and that, so far, no mention had been made of the scale of remuneration under which the medical referees would act. It was decided that a sub-committee be appointed to enquire into the requirements of the Insurance Companies in connection with the Act and to make suggestions as to the remuneration of medical referees. It was further decided to ask members to hold their hands with respect to any rates that might be offered until the question of remuneration has been decided.

ANNUAL MEETING.

The Annual Meeting of the South Australian Branch was held at the House of the Branch, Hindmarsh Square, Adelaide, on June 28, the President (Dr. Poulton) in the chair. There was a very large number of members present. This meeting was recognised as a very important occasion in the history of the S.A. Branch, as this was the first time that the Branch had met in the new house, which has been acquired by the British Medical Hall Company, Ltd., and which it is anticipated will eventually become the property of the S.A. Branch.

The formal portion of the meeting took place at 3 o'clock, and the office bearers for the present year were then elected. For the first time for many years there was competition for the three vacant places on the Council, as seven candidates had been nominated, and an election was necessary. This fact is looked on as an indication of increased interest in the affairs of the branch by members. As in previous years, the Council's nominees have been elected to the vacant offices.

The Annual Report and Balance Sheet were read and adopted, and the following were declared elected for the current year:—

President: Dr. E. W. Morris.

Vice-President: Dr. J. Corbin.

Hon. Secretary: Dr. H. S. Newland.

Local Editor: Dr. T. G. Wilson.

Hon. Auditor: Dr. H. H. Wigg.

Members of Council: Dr. J. A. Bonnin, Dr. A. C. Magarey, and Dr. H. A. Powell.

Hon. Treasurer: Dr. St. John Poole.

Library Committee: Dr. H. Rischbieth, Dr. de Crespigny, Dr. F. S. Hone, Dr. H. S. Newland.

Dr. E. W. Morris referred in sympathetic terms to the loss sustained by the branch by the death of Dr. A. E. Wigg, who had acted as Hon. Auditor for many years.

The retiring president referred to some of the leading incidents and the most important work done during his term of office, and concluded by inviting all members of the branch to take an active part in its work by subscribing to the Medical Hall Company, so as to relieve the onus which at present rested altogether on the shoulders of the foundation members.

After the conclusion of the Council Meeting members had an opportunity of inspecting the new house, and expressions of pleasure at the way the Main Hall and the whole building have been put in order were universal.

OPENING OF THE LISTER HALL IN ADELAIDE.

At 4 o'clock the formal opening of the Main Hall took place. Sir Harry Allen, the Dean of the Faculty of Medicine in Melbourne, had been asked to come over and perform this ceremony, and to deliver an address on Lord Lister and his work. This was particularly appropriate, as the Council had decided to name the Main Hall the "Lister Hall," as a tribute to the memory of that great pioneer in antiseptic surgery. The Vice-Chancellor of the University, Dr. Barlow, and the Members of the Council of the University were present by invitation of the Council. Dr. Kenny, the President of the Victorian Branch, and Dr. Fetherstone, of Melbourne, came as the representatives of the Victorian Branch, and Dr. Brooks was present as representing the Tasmanian Branch.

Dr. Poulton, at the request of the President, made a short statement of the movement which had led up to the securing of the Branch's new premises. Formed in the early eighties, the meeting place was first the boardroom of the Adelaide Hospital, then the out-patient waiting room. During later years the University had generously provided accommodation for monthly and annual meetings. Thanks were due to the governors of these institutions. About three years ago, at Dr. W. T. Hayward's initiative, a movement was

started for the purpose of acquiring a home for the Branch. A Company consisting of Branch members was formed, and after careful enquiry the present purchase had been made in preference to accepting the very generous offer of Dr. W. A. Verco to provide a hall free of charge. Many members had subscribed most generously and given their shares in the Company to the Branch. It was hoped that all members would take a share in the enterprise, that the existing mortgage would be paid off within a short time, and that the ultimate aim, the absolute acquisition of the property by the Branch, would soon be accomplished.

In 1913, an appeal arrived from London for help in erecting memorials in England to the memory of the illustrious late Lord Lister, which suggested the desirability of making a local memorial and naming the Hall of the new B.M.A. Building The Lister Hall.

The Council had invited Professor Sir Harry Allen, of the University of Melbourne, to deliver an address on Lister and his work, and he had great pleasure in introducing the Professor.

Dr. Poulton, in the name of the members, regretted the unavoidable absence of the Rt. Hon. Sir Samuel Way, Chancellor of the University, and welcomed the presence of the Vice-Chancellor, Dr. Barlow, C.M.G., the members of the Council and Professorial Staff, and the other gentlemen who had honoured them by coming to the function.

Sir Harry Allen then formally dedicated the Hall to the memory of Lord Lister on behalf of the Members of the Branch, and at the same time unveiled a life-like portrait in oils, by Mr. Webb, the well-known South Australian artist, of Lord Lister, which had been presented to the Branch by Dr. H. S. Newland, the Hon. Secretary of the Branch. The Branch was deeply indebted to Dr. Newland for his generous gift, and also for the untiring energy displayed by him in the negotiations connected with the "Home," and for the manner in which he had worked for this object during the last two or three years. The members of the Branch all recognised how dear the consummation of this project had been to Dr. Newland, and how much the smoothness of the whole proceedings were due to his forethought and careful preparations.

Sir Harry Allen then delivered his Address on "Lord Lister," which will be published in full in a subsequent issue. The Address was greatly appreciated.

The President, Dr. M. Morris, then asked Dr. Barlow to convey to the Council of the University the sincere thanks of the Branch for the accommodation which the Council of the University had for so many years given to the Branch for the holding of their meetings.

Annual Dinner of the S.A. Branch.

The Annual Dinner of the South Australian Branch was held at the Cafe Rubeo, Adelaide, on the evening of 25th June. About 80 members were present.

After the loyal toasts, Dr. A. L. Kenny proposed the toast "The British Medical Association," the largest association of medical men in the world to which it was a proud privilege for any medical man to belong. The Council of the Victorian Branch of the British Medical Association had expressed the strongest possible wish to be represented at that day's ceremony from a feeling of fraternal unity and in recognition of the courtesy of the South Australian Branch, which had on three occasions, in the persons of Drs. Hamilton, Russel, Stawell, and J. W. Barett, invited members of the Victorian Branch to come over and address them. There was now a close bond of union amongst the branches of the Association in Australia on general principle, but the union should be carefully fostered in detail, so that a united opinion might be expressed on matters of common professional interest.

Nationalisation of medical practice demanded mature consideration from the point of view of the profession and of the general public. From both points of view he feared the tendency of mediocrity of work from the loss of the stimulus of competition. National Insurance seemed, in England, to improve the remuneration of the rank and file of the profession (who deserved the prime consideration of the branches), as compared with contract rates in Australia. Negotiations with Friendly Societies should be conducted in a broad spirit of conciliation and compromise, with due regard to the adequate reward for the more difficult work now exacted from the profession in the interest of Lodge members. The realization of a satisfactory understanding between the profession and the Friendly Societies would impose an insurmountable obstacle to legislation for National Insurance in a Commonwealth in which properly conducted Lodge practice supplied in a much more desirable form the necessary medical care of practically the only portion of the population for whom National Insurance could be supposed to be required. In Victoria a Guarantee Fund was being raised to provide for cases of medical men who might suffer pecuniary loss as a consequence of their loyalty to professional ideals—the amounts subscribed were instantly invested by trustees in easily liquidated gilt-edged investments, the interest of which was regularly paid to the donors. The provision of a large paid-up guarantee fund would tend to prevent the danger of any of the fund having to be used. The union of the Australian Branches in the Federal Council had already borne great fruit, and nothing of greater importance to the welfare of the profession in Australia had been accomplished than the establishment of one Medical Journal for the whole of Australia, the first number of which would appear on July 4th. In the history of the profession in Australasia there had never been placed in the hands of one medical man so great a power as was now given to the Editor of that Journal.

Dr. Morris, the President of the S.A. Branch, responded in an excellent speech.

Dr. J. C. Verco, in proposing the health of "The Listerian Orator" (Sir Harry Allen), said that some of life's experiences were a special pleasure; and surely that evening's gathering must be such to all those present, and particularly to Sir Harry Allen and himself; to them all, because, besides other weighty reasons, they had an opportunity of showing their high regard for their esteemed visitor; to him, as the man whom the Branch delighted to honour, and to himself as the one chosen to voice their united and kindly sentiments.

Many of those present doubtless remembered Sir Harry as quite a young man, when he came over to South Australia, seven and twenty years ago, to the first session of the Intercolonial Medical Congress, and recalled his sturdy form, his erect carriage, his genial face, his distinct round voice, as he read the Presidential Address in the Section of Medicine for Dr. Williams, who was unable to be present. Those same qualities characterised him still. They would remember, too, how he was entrusted with three important matters to introduce as subjects for discussion: (1) Triennial Sessions of Congress, (2) Federation of the Medical Societies and Associations throughout Australasia, (3) An inclusive medical journal which should represent the whole profession. The first he strongly and definitely advised; this was adopted, and had been in force ever since. With reference to the second and third he expressed his sympathy, but regarded them rather as ideals, and counselled caution and deliberation without any precipitancy. His advice was followed. The ideals were kept in sight, the way for them was prepared, and plans were laid and gradually matured. And now, a quarter of a century later, all the medical societies and associations of Australia and Tasmania had been practically welded into one great body, and the Medical Journal of Australia had been established, and they were told that on July 4th, 'the Glorious Fourth,' its first number would be published, as the organ of a united medical profession. Surely Sir Harry Allen's visit to South Australia had been well timed, and they might congratulate him as well as themselves on the actual realization of ideals, which had had his sympathy, though they seemed so far away, too desirable to be possible, too good to be true.

He saw Prof. Allen next in Melbourne, as Pathologist at the Hospital, and Professor of Pathology in the University, and he hoped he would be forgiven if he told (he feared without a trace of penitence) a trick he played on him. Calling at Prof. Allen's house he learned he was at work, and found him in the P.M. room with a number of students

round a corpse. He stood behind him, unobserved, and listened and looked on. Prof. Allen began with rigor mortis, continued with discolouration of the skin, and discussed that body from navel to backbone, and from the sole of the foot to the crown of its head; and in all his medical experience, in the old country or in this, the speaker had never seen a pathological demonstration to surpass or to equal it. He felt like a certain visitor to King Solomon in the midst of his court and his suite, "Blessed are the men, blessed are these thy servants (or students) who stand continually before thee, and hear thy wisdom." When it was over he emerged from the crowd, and to the demonstrator's great surprise introduced himself.

The Australasian Medical Gazette, when congratulating him on his knighthood, said he "created the Museum of Pathology at the Melbourne University." He well remembered him taking him (the speaker) round the Museum in those early days of its creation, and how interested and pleased he was with Prof. Allen's system of duplicate specimens; the best preserved in sealed jars on the shelves, to be looked at as they stood, and a second set in jars with removable covers, to be taken out and handled and examined ad lib. and then replaced. It struck him as a flash of genius, a proof of the industry of the pathologist, and of his interest in the progress of his students.

Who does not remember Prof. Allen in Hobart, when he opened the discussion on Cancer, before the Governor and other celebrities of Tasmania. Dr. Verco had special reason to recall it, for he followed him with another paper, written at Prof. Allen's request, on Cancer in South Australia. Later on, he received as his reward a left-handed compliment from an irate South Australian practitioner, who growled out, "Yes, Allen and Verco killed the Congress with their Dry (with a capital D) statistics," in which mouthful of irritating chaff there were, no doubt, some grains of good wheat, though in their husk and unwinnowed. And have they not borne fruit since, in the arrangement that only abstracts of the long and elaborate papers shall be read before Congress?

But Prof. Allen's golden opportunity came in 1908, when by the voice of the profession in Victoria he was translated to the presidental chair of the Congress in Melbourne. From that session the speaker was, unfortunately, absent; and so could not do full justice to his ruling capacity as a chairman, to the depth and breadth and literary style of his splendid presidental address, and the charm and grace of his entertainment, and that of his wife, as host and hostess. All this he missed, and it was his loss. But the record of it in the printed proceedings, and the memory of it in the experience of those present remain as a crowning glory of his professional career.

In response to the request of the Branch Council he has to-day publicly dedicated their hall to the memory of Lord Lister, unveiled his portrait, and delivered an oration. About this it was impossible to speak too highly. It was a splendid effort, worthy of the great man he honoured, and worthy of the man who honoured him. He had laid the Members of the Branch under an obligation, for which they had already tendered him their hearty thanks. He wished to tell Sir Harry Allen that he had inscribed his name first in the annals of the Lister Hall, and this inscription he had illuminated by his act of courtesy and his brilliant oration.

In conclusion, he desired to congratulate Sir Harry Allen cordially on the distinction conferred on him by the King as a New Year's honour, consented to by all as well bestowed because so well deserved. May he live long to enjoy his decoration and to adorn his title.

He wished Sir Harry Allen a long life, good health, troops of friends and happiness for ever.

Sir Harry Allen thanked Dr. Verco for the kind appreciation of his work, and the members of the Branch for their warm welcome. The work had been strenuous, but as Dr. Verco had called up recollections of one gathering of the profession after another, there came to his own mind the memories of kindness upon kindness that he had received, so that on the balance of the long history he was inclined to think that perhaps he was in the debt of his fellow members (Cries of No! No!) Dr. Kenny had dealt eloquently with the present position of the Association in Australia and with the negotiations now in progress. It was most gratifying to note the sweet reasonableness of the attitude of the leaders of the Association. When he visited Ireland in 1912, he was invited to attend a country Court of Petty Sessions, and the cases that came under consideration were so full of valuable lessons that a brief summary might provoke useful thought. A man charged with being drunk and insulting the parish priest, defended himself in this wise. "Constable, was I as drunk as you say I was?" "You were very drunk." "Didn't I go home when you told me?" "You didn't go home till I made you." "Constable, wasn't it a very dangerous way for me to go home, if I was so drunk " "It was a dangerous way." "Well, constable, will you explain to the Bench why you did not arrest me, seeing I was so drunk, and the road so dangerous?" The Bench wished to let him off, and asked the constable "was it a Fair day?" "No, it was not a Fair day." "Was it near a Fair day?" The constable was adamant when he should have accepted the way out. In most things there is a time when a small concession saves the whole situation. The next case was one of goose trespass. Three farms went down to one pond, and all the owners had right of access. One farmer complained that the geese of another continually trespassed on his grass. The defendant, a voluble son of the soil, protested that it was unavoidable, that it had been so for generations. The plaintiff, a dour Northerner, would only say, "I have told him over and over again to educate his geese." The Bench deliberated and announced that it was an obscure case of title, and strongly recommended the parties to settle it among themselves, as otherwise it must go to a higher Court. This was a good example of the necessity to look at a question from both sides, and by a friendly understanding to avoid increasing bitterness. Another case was one of assault. The complainant came into Court richly bandaged about the head, and the defending attorney at once asked for a postponement. He was not willing to fight at a disadvantage. With a little delay the bandages would no longer plead against him. It is well to avoid a decision if the time and occasion are unfavourable. On leaving the Court, the Senior Justice met a police officer who had just returned from Ulster. He asked what the officer had seen. The reply was—"Take my word for it, your Honour, those men are drilled. I know by the way they carry themselves." It matters not what side you are on, the victory is apt to be with drill and organisation. It was a happy thing for the Association in Australia that its efforts after organisation had been so successful. In his own career, Sir Harry Allen said that nothing had given him greater pleasure than any assistance he had been able to give in the union of the two medical organisations of Victoria and bringing the profession solidly under the banner of the British Medical Association. They were proud of their profession and jealous of its honour. They cherished the relations of trust and confidence that existed between the practitioner and his patients. Let them stoutly resolve never to consent to any degradation of the standards won by their professional forefathers, never to agree to any proposals that would involve the substitution of mechanical drudgery and official routine for a live scientific interest. The results that had accrued from the organising campaign in Victoria had exceeded his utmost hopes, and constituted the most happy augury for a fortunate issue to all their endeavours.

"Our Guests" was proposed by Dr. Hone, and Dr. Fetherston, in his reply, thanked the members for the reception they had given to the toast of the visitors and assured them that the members of the Association in Victoria were delighted to know that the S.A. Branch had arranged to have a building of their own. He was sure that with a strong branch in each State the success of the profession in their negotiations for fair terms from the Friendly Societies was assured. Nothing gave him more pleasure than being present that evening.

The Vice-President, Dr. J. Corbin proposed the toast of the Honorary Secretary, which was enthusiastically received. Dr. Newland replied.

Medical News.

We learn with great regret that Dr. P. H. Pye-Smith, the illustrious physician of Guy's hospital, died on May 23rd, at the age of 75 years. As a zoologist, physiologist, physician, and authority of life assurance, as well as a teacher, he was held in the highest esteem, and his reputation in these branches of science was international. His numerous friends and pupils in Australia will mourn his death sincerely.

The medical profession in England has sustained another great loss by the death, at the age of 67 years, of Sir Francis Laking, Bart, G.C.V.O., K.C.B. Sir Francis was Physician-in-Ordinary to King Edward, and later to King George, and was the recipient of a large number of English and foreign orders.

Sir William Leishman, F.R.S., R.A.M.C., has been elected a Fellow of the Royal College of Physicians of London.

The Secretary of State for the Colonies has accepted an official invitation to participate at the International Congress of Neurology, Psychiatry and Physchology, which will be held in Bern from the 7th to 12th September, 1914. The Minister has accepted the invitation and has appointed Dr. George E. Rennie, B.A., M.D., F.R.C.P., representative of the Commonwealth. The General Secretary of the Congress is M. L. Schnyder, 31 rue Monbijou, Bern, to whom all communications relative to the Congress should be addressed. His Excellency Geheimrat Ehrlich will introduce the discussion on tabes and general paralysis since the discovery of the spirochaeta pallida, and Dr. Mott will introduce the discussion on psychological heredity. An interesting programme has been drawn up.

Sir Alexander Peacock, the Minister of Labour of the State of Victoria, has announced that he will institute an enquiry into the conditions of labour and hours of duty of hospital attendants, with the view of the appointment of a Wages' Board.

The Public Health Department of Victoria has issued the following notice to the various municipalities:—

In pursuance of the provisions of the Infectious Diseases Hospital Act 1914, and of regulations made thereunder, I hereby give notice that I have specified Wednesday, 12th August, 1914, as the day on or before which councils may nominate a suitable person to be its representative member on the Queen's Memorial Infectious Diseases Hospital Board.

We understand that Cr. T. Smith has already been nominated as the candidate for the group comprising Port Melbourne, South Melbourne, St. Kilda and Brighton. It will be remembered that an Act was passed at the end of the summer session for the reform of the municipal committee controlling the Infectious Diseases Hospital. Considerable delay has occurred, but the Minister of Health is now taking steps for the formation of the new committee.

The Williamstown Council (Victoria), has allocated its annual charity vote of £80 as follows:—Williamstown and Footscray Hospital, £25; Williamstown Ladies' Benevolent Society, £15; Melbourne Hospital, £10; Children's Hospital, £5; Benevolent Asylum, £5; Alfred Hospital, £5; Austin Hospital and Queen Victoria Hospital, £2 each; Royal Institute for the Blind, Homœopathic Hospital, St. Vincent's Hospital, Eye and Ear Hospital, Deaf and Dumb Institution, Foundling Hospital, Little Sisters of the Poor, Institute for the Blind (Adult), St. John Ambulance Society, Gordon Institute and Talbot Epileptic Colony, £1 each.

The Director of the Perth Museum (Mr. Bernard H. Woodward) has just received from Mr. J. W. W Graham, of Wahganinya, 18 miles west of Balladonia, a box of fossil bones containing remains of Diprotodon, Nacropus, Phascolomys (extinct wombat), Phascolonus (extinct giant wombat), and Sarcophilus (extinct continental form of Tasmanian devil). A full description of these bones will be published as soon as possible. They are of the greatest interest in working out the history of the collection of the marsupial fauna of this State, and the Director hopes that other pastoralists, when making dams, will look out for any fossil bones that may be found, and will forward them to him.

The Council of the New South Wales Bush-Nursing Association has just issued its third annual report. The Association has been carrying out the work of nursing in six separate districts. The work at times has been conducted under considerable difficulty. The Association is handicapped by the fact that its income is not large enough to cover the expenses of the work it would wish to undertake. The Council is now appealing for funds from the general public.

The Chairman of the Palmerston North Hospital and Charitable Aid Board, addressed a letter to the Auckland Hospital Board asking for support in the appeal for funds to establish a radium institute in the North Island. The question of site would be determined later on. Since treatment by radium had passed beyond the experimental stage it was felt that the erection of an institution of this kind was a necessity. Information was being sought from radium institutions in England, America, and the Continent of Europe, in order that the funds might be economically expended. Over £2000 had already been subscribed. An expert operator and trained nurses would have to be secured from England. The Auckland Hospital Board referred the matter to the Hospital Committee for consideration and report.

At a meeting of the Auckland Hospital Board the recommendation of a Hospital Committee that Dr. Grant be asked to serve for the fourth year on the staff at a salary of £300 per annum was the subject of some discussion. It was eventually resolved that the above named salary be increased to £350. It was felt that Honorary Physicians could not be expected to devote sufficient attention to patients in the hospital, and that the patients would benefit by the services of whole time salaried medical officers.

Information was sought by Mr. Maloney, of Victoria, in the House of Representatives, on June 19, as to the conditions governing the imposition of solitary confinement at the Queenscliff barracks. He wanted to know if the confinement was the same as observed in the Victorian prisons. The hon. Minister representing the Minister of Defence stated that section 135 of the Defence Act authorised the commitment of trainees to detention in any prescribed institution or place. Regulation 122, as passed in April, 1913, defined such prescribed place as "any place kept or used for military purposes, or any other institution or place authorised by the Minister." Section 135 of the Act made the trainee committed to detention subject to the regulations governing the institution. At Queenscliff the first detention under the regulation was on 24th March, 1914. Solitary confinement at Queenscliff was not the same as practised in the Victorian prisons. Cadets undergoing confinement in the detention room were given a diet consisting of bread, cheese, beef or mutton, pork, oatmeal, peas, potatoes, salt, and flour. The Minister, however, was revising the regulation with a view to prohibiting the punishment of separate confinement for offences against the universal training provisions of the Defence Act.

Public Health.

HEALTH LEGISLATION IN NEW SOUTH WALES.

Prevention of Consumption.

According to the "Daily Telegraph," of Sydney, the Minister for Public Health is preparing a large programme destined to improve the health of the community. It appears that the "Consumption Bill" has already been drafted, and provides for the removal from factories of all persons suffering from tuberculosis in a form which renders them a danger to others. Steps will be taken to instruct persons suffering from the milder and earlier forms of this disease how the risk of infecting others may be minimised. The Bill further provides for the compulsory disinfection of rooms which have been inhabited by consumptives, both in hotels and in boarding houses. Better

sanitation in respect of country hotels is to be insisted on. The dispensary treatment of tuberculosis is to be extended throughout the State, while compulsory notification of advanced cases and the establishment of sanitoria are promised.

Post-maternity Homes.

Another proposal is the establishment of rest homes for mothers and their infants during the lactation period. It is suggested that a woman should be able to seek rest from her home duties in these institutions for as long a period as may be found necessary. This piece of legislation is intended to form part of the Government scheme for the protection of infant life.

Convalescent Homes.

Closely allied to the rest homes are convalescent homes for the reception of women who have been acutely ill. It is pointed out that these homes are intended primarily for shop girls suffering from anæmia and its attendant complications, for plumbers and painters suffering from lead poisoning, and for slaughter-house workers suffering from blood-poisoning. It is pointed out that this scheme would be a means of relieving the congestion of the public hospitals.

District Hospitals.

The Minister for Public Health intimates that he will provide a "Cordon of District Hospitals" to surround the metropolitan area, in order to relieve the cottage hospitals. The latter, he states, are unable to accommodate all the patients who seek admission.

Dental Treatment for School Children.

Another item of the policy of health legislation is the institution of free dental treatment for all school children, whose parents are not in a position to pay for this outside. The Dental Hospital will, it is believed, be taken over by the Government, and a Chair of Dentistry set up at the University. It has been represented to the Minister that a large amount of sickness is dependent on diseases and defects of the teeth. He has, therefore, come to the conclusion that his health campaign will not be complete unless provision is made for wholesale dental treatment.

Training in Nursing.

It is further forecasted that considerable sums of money are to be spent on the extension of the bush-nursing scheme, and that instruction is to be given to women in their own homes in nursing. Great prominence is given to the importance, from the point of view of the public health, of the functions of the visiting and district nursing. It is not quite clear from the report published in the "Daily Telegraph" whether this plan of home-nursing instruction is to relieve, to some extent, the trained nurse in her arduous duties, or whether the amateur nursing is to be an ornamental adjunct to the real thing.

Maternity Benefits.

In addition to the £5 maternity bonus the Minister proposes that every woman who desires it shall be provided out of the public purse with a doctor, and a nurse to look after her during her confinement. We are informed that a substantial sum is being placed on the Estimates to pay for this treatment. Home instruction on the care of infants, infant hospitals, and schools for mothers all find a place in the programme.

DIPHTHERIA IN VICTORIA.

Dr. Agnew, the Health Officer for Collingwood, Victoria, in his report, pointed out that a number of patients had been treated privately for diphtheria without official notification. There was, he stated, much laxity in this respect. In his report it was stated that no less than 76 deaths had occurred from this disease, but it was explained that only three of these actually affected Collingwood.

We learn that steps are being taken to check the spread of the epidemic in Richmond. At Coburg, a bacteriological examination of 200 children's fauces is stated to have revealed the presence of no less than four "carriers." The four children have been removed to the Infectious Diseases Hospital.

Nine cases have been reported in Ballarat during the past month. The majority of these are stated to have occurred at an institution where a "carrier" has been discovered.

NEW ZEALAND.

During the month of May, eight cases of diphtheria have been recorded in Auckland, 19 cases in the suburbs, and 19 cases in the country districts, making a total of 46 cases. In the urban and rural districts there were 38 cases of enteric fever notified during the month.

NEW SOUTH WALES.

During the month of May, 65 cases of typhoid and 69 cases of diphtheria were officially reported in Broken Hill, as compared with 38 and 91 for May of last year.

The Yass hospital committee has forwarded another communication to the Chief Secretary in regard to a special grant of £218 to defray the cost of treatment of the typhoid fever patients from the railway camps. The letter emphasises the fact that the hospital received £9/10 in patients' fees, and that this represents the whole income standing against the amount of £228/5/11 expended on the building, maintenance, and special nursing.

HEALTH OF SCHOOL CHILDREN IN NEW ZEALAND.

At a recent meeting of the Wellington District Education Board, the medical inspector, Dr. Elizabeth Green, submitted a report on the inspection of 19 of the schools under the Board's jurisdiction. She showed that in the case of some schools 50 per cent. of the pupils suffered from malnutrition, in other words, from starvation. This, of course, was due to the ignorance of parents. It was pointed out that many children hurry over their breakfasts, eat their lunches on the way to school, and are practically condemned to eight or nine hours of fasting. 19 schools were visited, and 915 children were examined, of whom 457 were special cases; 478 children were examined in the ordinary routine, and of these only 128 were found to have no defects; 268 had defects other than dental, and the large number of 137 showed evidence of malnutrition. The defects are classified as follows:—Skin disease, 21; defective teeth, 232; enlarged glands, 110; external eye disease, 4; defective vision, 54; external ear disease, 2; defective hearing, 55; defective speech, 9; non-vaccination, 264; circulatory, 7; respiratory disease, 5; nervous disease, 1; tuberculosis, 3 (and 3 doubtful); stooped shoulders, 91; curvature, 7; flat chest, 42; pigeon breast, 3; other diseases, 14. The report condemns the present system of ventilator in use at all schools visited, and the sanitary system was severely criticised. The report was fully discussed, and the following motion was carried unanimously:—"That the Department be informed that the Board considers that medical inspection should be carried further, and that hints should be given to parents as to the nature of food which should be given to children."

Vital Statistics.

The Government Statistician's report on the vital statistics of Hobart and Launceston for May shows a birth rate of 2.68 and 3.32 per 1000 respectively, and a death rate of 0.85 per 1000 in each city. The number of inmates in the various institutions in the two cities was 522, and of this number 12 died. There were no deaths from typhoid fever or diphtheria, while during the five months of the present year, only one death has been recorded from Hobart and two from Launceston as due to typhoid fever, and three and one respectively due to diphtheria. The returns dealing with the country districts of Tasmania show that the birth rate during May was 2.42 per 1000 population, and the death rate, 0.61 per 1000. Three deaths due to diphtheria were recorded.

Hospitals.

THE CHILDREN'S HOSPITAL IN BRISBANE.

A deputation, introduced by the Hon. A. G. C. Hawthorn, M.L.C., waited upon the Queensland State Treasurer for the purpose of laying before him the facts concerning the Children's Hospital. The accommodation was quite inadequate for the needs, and the Committee estimated that a sum of nearly £17,000 would be required to enable them to undertake the work of rebuilding. A nurses' home, as well as a laundry, a mortuary, and other departments, were urgently required. The deputation asked for an assurance that the Treasurer would grant a loan of from £8000 to £10,000, which, together with the funds they had in hand, would enable them to proceed with the work. The State Minister (Mr. Barnes) in his reply, stated that he felt that the Committee was doing a great work in an admirable way. He was prepared, in spite of its unusual nature, to lay the request before the Cabinet, and if it were granted, he promised that the loan would be on very favourable terms.

Medico-Legal.

PRACTICE BY A HERBALIST.

The Medical Board v. Taufik Raad.

The Acting Chief Justice (Mr. Justice Burnside) and Mr. Mr. Justice Rooth, delivered a reserved decision on the 15th June. in an appeal case stated by Mr. A. S. Roe, P.M. The Registrar of the Medical Board alleged that the defendant, not being a duly registered medical practitioner, had held himself out by means of an advertisement in the "West Australian" newspaper on August 13, 1913, as prepared to give medical advice. The magistrate had dismissed the complaint. The decision of the Full Court was that the appeal should be allowed, and an order was made remitting the case back to the magistrate. The advertisement contained the following passage: "Taufik Raad is qualified and holds University diplomas; he has stood the test of time. If you have blood trouble or any other ailment, consult him. Advice free." Mr. Justice Burnside stated that he found that Taufik Raad was not duly registered. In regard to the offering medical advice. he found that the final portion infringed the grounds prescribed by the Act, and was in his opinion a clear and direct intimation that the advertiser was willing to give medical advice. The giving of medical advice was the privilege of medical practitioners only. That was the law of the land, and the respondent must, therefore, be convicted.

Special Correspondence.

(From our Special Correspondent.)

LONDON.

Heart Strain.

An interesting paper was read on April 2, by Dr, Strickland Goodall, before the Institute of Hygiene, on "Heart Strain and its Prevention." Referring to the enormous amount of work done by the heart, Dr. Goodall pointed out that from before birth until, usually, a short time after death, it beat uninterruptedly at rates varying form 70 to 150 or more contractions a minute, doing at each contraction enough work to raise a 2lb. weight through a foot. Acute heart strain was difficult to produce in a young, well-nourished and healthy adult, but it was very easy to produce if the heart muscle was anæmic, poisoned, or the seat of degenerative change. When the heart was strained it lost its power of doing extra work. He had seen cases in which the heart had actually burst, and one case in which an animal had ruptured its heart, and died from emotion. Heart strain might be induced in some of the common, thoughtless actions of everyday life, as, for instance, in the action of running to catch a train. In an actual experiment, made on a person with a healthy heart, before the run the heart rate was 76 per minute, and the heart was doing 152 foot lbs. of work a minute; after the run the heart rate was 180 per minute, and the heart was doing 360 foot lbs. a minute; an increase of 228 foot lbs. per minute. Great strain might also be imposed upon the heart by ascending stairs hurriedly. Emotions affected the the heart, and as a result of anger the work of the heart might be increased from 152 to 224 foot lbs. per minute. "Keep your temper" was, therefore, good physiological advice. When the cardiac rate and work was increased by strenuous exertions it was not only during the actual exertion that the heart's work was increased, but extra work continued to be done for some time after the cessation of the exertion. The enormous amount of total extra work done by the heart was shown in the experiment of riding a bicycle uphill, the gradient being 1 in 10, the length 2904ft., and the time of the ride 3½ minutes. In a tested example the extra work would have raised 1⅛ tons through one foot. The work of the heart could be economised in many ways. If one went to bed every night at ten instead of twelve, the heart would be saved 876,000 foot lbs. of work in a year; by laying down half an hour daily there would be an annual economy of 219,000 foot lbs.; an hour's rest every Sunday would save 62,400 foot lbs., and by spending every Sunday in bed instead of only sleeping eight hours the saving in the year would be 998,400 foot lbs.

Shortage of Nurses for the Metropolitan Asylums' Board Hospitals.

The question of the terms and conditions of service of the nursing staff employed by the Metropolitan Asylums Board has been recently inquired into by the principal medical officer and the Hospitals Committee, and their reports were presented at a recent meeting of the Board. The dearth of nurses is, the committee reported, a very serious matter to the Board, and they strongly emphasised the importance of taking all possible steps promptly to meet the difficulty. About a year ago the question of curtailing the accommodation devoted to certain of the infectious diseases was seriously contemplated, not on account of the lack of beds, of which at that time there were plenty, but entirely owing to the fact that nurses could not be obtained. All the hospital matrons report an insufficient supply of nurses. Not only have trained staff nurses been difficult to obtain, but their stay has often been too short to allow them to become useful members of the staff, since many leave at the end of six months, while the quality of their work has been spoken of in unfavourable terms by their superior officers. The number of probationers is still far too small. The estimated requirements of the acute hospitals made by the medical superintendents in March, 1912, were: Probationers, 264; assistant nurses (class 2), 160. On January 3, 1914, the numbers were: Probationers, 169; assistant nurses (class 2), 250. This reversal of the desired proportion between the two grades is serious, because it produces a corresponding diminution in the number of fever-trained staff nurses, whose services are of so much importance in the work of the hospitals, since at present very few of the assistant nurses complete the two years' training.

With the view of attracting to the service candidates who have hitherto been debarred by reason of age, the committee put forward recommendations for the reduction of the minimum age limit of probationers, assistant nurses, and staff nurses. They also recommend an all-round increase of salary of the various classes of nurses, long service pay at the end of five years' continuous service in the respective grades, the examination and promotion of certain first assistant nurses, and on various other matters, including extra leave. Similar proposals are made as regards the convalescent and the children's hospitals. In the latter institutions it is proposed to double the minimum salary of probationers.

The increased pay under the proposed scale would be about £4300 a year, rising to £6440 in the third year, and falling to £5000 in the fifth year and onwards. In addi-

tion, the long service pay will exceed £1000 a year, increasing as the staff complete the required period of service.

Grants for Research.

The President of the Local Government Board has authorised the following special researches to be paid for out of the annual grant in aid of scientific investigation concerning the causes and processes of disease:—

1. An investigation by Dr. Eardley Holland into the causes of still-births.
2. A continuation of the Board's inquiry into the cellular contents of milk by Professor Sims Woodhead.
3. A continuation of the Board's inquiry into the causes of premature arterial degeneration, by Dr. F. W. Andrewes.
4. An investigation by Dr. M. H. Gordon and Dr. A. E. Gow into the etiology of epidemic diarrhœa in children.

The Prevention of Venereal Diseases.

At the twenty-sixth meeting of the Royal Commission on Venereal Diseases, Dr. Douglas White gave some interesting statistical information on the prevalence of syphilis and gonorrhœ in the United Kingdom. He said that he had arrived at the conclusion that there were every year 122,500 fresh cases of venereal diseases in London, and 800,000 fresh cases in the United Kingdom. He computed that of the 800,000 fresh cases 114,000 would be syphilis and the remaining 686,000 cases gonorrhœa and chancroid. From these figures he deduced that there must be in the United Kingdom some 3,000,000 syphilitics.

In the United Kingdom there were about 2600 deaths annually from general paralysis, and about 700 deaths from locomotor ataxy. If it may be assumed that 3 per cent. of cases of syphilis result in death from these diseases, the conclusion is reached that there are about 111,000 syphilitic infections annually.

The Ether of Space.

On March 12, Sir Oliver Lodge addresed the members of the City Temple Literary Society on "The Ether of Space." It would, he pointed out, be confusing to call ether matter. Two things were distinct. Matter was moved; ether was strained. The uniting, welding force in the material world was the continuous medium which united all the scattered particles of matter. The whole universe was linked up together by one continuous all-penetrating uniform, cohesive medium. Could they imagine a limit beyond which there was nothing? He could not. It seemed to him to go on and on without end. Could they imagine anything like that? He could not. Yet either there must be a boundary or there must not. They were both inconceivable, yet one was true. This world must have had an infinite past, and an infinite past must be going to have an infinite future. The past had gone through great labour, great preparation, and had now reached for the moment that climax: it had produced us. The future depended to some extent upon our activities. We were a conscious part of a scheme.

Correspondence.

THE MEDICAL JOURNAL OF AUSTRALIA.

On the eve of the production of the first number of the "Medical Joursal of Australia," I desire, as President of the Victorian Branch of the British Medical Association, to offer to you the best wishes of its members.

Our old journal, which has appeared under various titles and editors since the fifties, now merges its existence with yours, just as our Branch by the act of publication of our new journal joins interest with all the Branches of the British Medical Association in Australia.

The first issue of the new journal is an occurrence of greater importance than anything that has happened in the history of the medical profession in Australia, not even excepting the foundation of the Australasian Medical Congress, since the new journal symbolises the intimate union of all the Branches of the British Medical Association in Australia, and it will continue every week to indicate and advocate the common aims, interests, and ideals of the profession.

We in Victoria are confident that you will use wisely, and well, a power that has never hitherto in Australia been placed in the hands of one medical man to use for the presentation and advocacy of the requirements and ambitions of our profession, and we assure you of our continued co-operation and support in your onerous task.

Our fondest wish to the "Medical Journal of Australia" and to yourself is:—

"Prospere, procede, et regna."

I have the honour to be, Sir,
Yours very faithfully,

Melbourne, 22nd June, 1914.

A. L. KENNY.

THE MEDICAL CONGRESS AND THE B.M.A.

Sir,—Dr. A. Jefferis Turner in the "Australasian Medical Gazette" of June 20th, says, "we do not know whether the next Congress is to be an Australasian Medical Congress or a Congress of the Australasian Branches of the B.M.A., or some hybrid of these impossible to define."

If the minutes are consulted, there can be no doubt as to the intention of Congress passed by an overwhelming majority, viz., that the Congress is to be a B.M.A. Congress, in so far as only members of the various Branches of the B.M.A. in Australasia are eligible.

To disregard this deliberate decision would be resented by all who value law and order in the conduct of medical affairs, and would not be tolerated.

I submit that Dr. Turner quite misapprehends the position.

Now that the Branches of the B.M.A. embrace almost all the reputable medical men in each State, surely it is reasonable and wise that Congresses should be organised to foster the Federal spirit between them, to strengthen their efforts to uplift the profession and diffuse scientific knowledge throughout Australasia. It is impossible that these objects can ever be served to the same degree by Congresses quite independent of the Branches of the B.M.A.

There are certain medical men in each State who have pursued so selfish a course, and displayed such a disregard for the general good and common interest, that they have become ineligible for membership of the Association.

Dr. Turner proposes that "the Congresses shall be neutral ground, on which men of every variety of social and political outlook may meet for the furtherance of science."

Presumably, this charter would admit the above backsliders, with disastrous results to the organisation of the profession, which has been built up with such labour and sacrifice.

Public attention is focussed on the Congresses. Other meetings of the profession pass unnoticed. If men, ostracised by the State organisations, are observed taking part in the Congresses, they will be immediately rehabilitated in public opinion, and their power for evil greatly increased.

At any rate, one would regret seeing Dr. Turner, who is so greatly respected, throwing the weight of his influence in a direction against the organisation which has done so much to raise both the scientific and material status of the profession, but that regret is much added to when one considers that he is one of the leading men in Brisbane at which the next Congress will be held.

Without organisation the profession must sink in public estimation, in status, in morale, in material prosperity. The welfare of the public is indissolubly bound up with that of the profession. The Congress, as a B.M.A. Congress, will strengthen the medical organisation; as an outside Congress its effect will be weakening. Therefore, all medical men who have regard for the profession to which they owe everything, all who are good citizens, will refuse to have anything to do with an outside Congress.

Yours, etc.,
RALPH WORRALL.

Sydney, June 26th, 1914.

Personal.

Dr. Victor Hurley has commenced practice at No. 2 Collins Street, Melbourne.

Dr. Wiston Baker has commenced practice at No. 631 Hay Street, Perth.

Dr. Katie Ardill has commenced practice at "Albermarle," Albermarle Street, Newcastle, New South Wales.

Dr. G. M. Parker has commenced practice in Swansea, Tasmania.

Dr. Robert Fowler has commenced practice at No. 127 Collins Street, Melbourne.

Dr. Lambert has resumed practice in Melbourne.

Dr. H. Russell Nolan has resumed practice at No. 229 Macquarie Street, Sydney.

Dr. Frank Wilson has resumed practice at Kodak Buildings, Queen Street, Brisbane.

Dr. Ormond has removed from High Street to the corner of Glenferrie Road and Haverbrack Avenue, Malvern.

Dr. Spring, of Ballarat East, has been elected president of St. Patrick's Old Collegians' Club.

Dr. H. P. Martell, of Moonee Ponds, Victoria, has been requested to contest Essendon seat for the Victorian Parliament.

Dr. W. E. Davis, D.D.S., has been appointed to be the representative of the Victorian Government at the sixth international dental congress to be held in London in August next.

Dr. Stang, who has resided here for two years, has relinquished practice. Dr. Pritchard, of Western Australia, succeeds him.

We learn with regret that Dr. Charles J. Martin, Director of the Lister Institute, London, and formerly Professor of Physiology at the Melbourne University, will not attend the meeting of the British Association in Australia next month.

The Hon. Secretary of the N.S.W. Branch advises that the name of Dr. F. Stanley Booth (Coogee, N.S.W.), was accidentally omitted from the special list of members of the Eastern Suburbs Medical Association, published in the Australasian Medical Gazette of June 27th, 1914.

Naval and Military News.

NEW ZEALAND MEDICAL CORPS.

Colonel James Robert Purdy is transferred to the Reserve of Officers.

Lieutenant-Colonel William Johnston Will, M.B., v.d., is appointed Director of Medical Services.

Lieutenant-Colonel William Johnston Will, M.B., v.d., Director of Medical Services, is appointed Colonel.

Victor Field Usher, M.D., to be Lieutenant.

Walter Stapley, M.D., to be Lieutenant.

Major Edward Jennings retires with permission to retain his rank and wear the prescribed uniform.

Medical Appointments.

The following appointments have received the approval of the State Governor of N.S. Wales, with the advice of the Executive Council:—

Lady Edeline Babies' Hospital: Dr. L. R. Parker, Dr. C. W. Reid, and Dr. H. C. Adams, as honorary visiting physicians; Dr. C. MacLaurin as honorary consulting surgeon; and Dr. T. S. Dixon as honorary consulting physician. Mrs. M. Ludlow and Mrs. M. Maitland as members of the board of Directors in the places of Mrs. McGowen and Mrs. Barnett.

Dr. K. McEwin has been appointed public vaccinator for the district of Balaklava, South Australia.

Dr. J. A. G. Hamilton has been appointed honorary gynæcologist at the Adelaide Hospital.

Dr. W. A. Verco has been appointed honorary assistant gynæcologist at the Adelaide Hospital.

Dr. Andrew Davidson has been appointed honorary physician in charge of the new nervous diseases ward at St. Vincent's Hospital, Melbourne.

Medical Appointments Vacant.

MAREEBA DISTRICT HOSPITAL.

APPLICATIONS MEDICAL SUPERINTENDENT.

Applications are invited, and will be received by the undersigned, until Wednesday, 22nd July, 1914, from Medical Practitioners willing to undertake duties of Medical Superintendent Mareeba District Hospital, North Queensland. Salary, £450 per annum, with right of private practice. Three months' notice either side terminates agreement. Full credentials and testimonials must be forwarded. All information obtainable from the secretary (Geo. H. O'Donnell.)

Births, Deaths, and Marriages.

The charge for inserting announcements of Births, Marriages and Deaths is 5s., which sum should be forwarded in money orders or stamps, with the notice, not later than the first post on Tuesday morning, in order to ensure insertion in the current issue.

Death.

ALLEN.—On June 23rd, at the Parramatta Hospital for the Insane, Sydney (suddenly), Lancelot Lloyd Allen, M.R.C.S., L.R.C.P., Lond., Medical Officer of the Hospital.

Warning Notices.

Medical Practitioners are requested not to apply for any appointment referred to below without having first communicated with the Honorary Secretary for the Branch of this Association:—

Appointment.	Hon. Secty. of Branch.
Brisbane United Friendly Societies' Institute, Lodges, etc., of the Longreach, Central Queensland, and Warwick Friendly Societies, Darling Downs, Queensland.	Queensland Branch, B.M.A., Wickham Terrace, Brisbane.
Goulburn Friendly Societies' Association, at Goulburn, N.S.W.	N. S. Wales Branch B.M.A., 30-34 Elizabeth Street, Sydney.
Swan District Medical Officer.	Western Australian Branch B.M.A., 230 St. George's Terrace, Perth.
Contract Practice in Western Australia.	Western Australian Branch B.M.A., 230 St. George's Terrace, Perth.
Lodges at Casino, N. S. Wales.	N. S. Wales Branch, B.M.A., 30-34 Elizabeth Street, Sydney.
Mount Kembla Colliery	Hon. Secretary of the South-Eastern Medical Association, Wollongong.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to the "Medical Journal of Australia" alone, unless the contrary be stated.

All communications should be addressed to "The Editor," "Medical Journal of Australia," B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.